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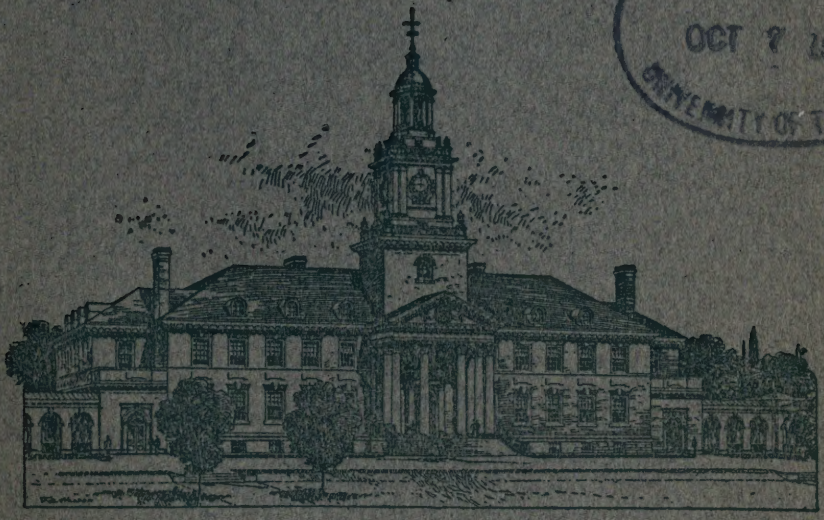

The Johns Hopkins Alumni Association

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SHALL THE 19TH AMENDMENT DESTROY "LOCAL SELF-GOVERNMENT" IN AMERICA? DOES IT THREATEN THE "PERMANENCY" OF THE UNITED STATES SENATE?

BY GEORGE STEWART BROWN, '93

A FUNDAMENTAL change in the form of our governmental structure has come about if the Woman Suffrage Amendment to the Federal Constitution is sustained by the Supreme Court.

(1) In ratifying the Amendment 38 State Legislatures, some of them 3000 miles away from the persons their action affects, have deliberately undertaken to determine, as cavalierly as if they were passing a local statute for themselves, who shall and shall not vote in Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi and Louisiana, whose people they do not know, whose delicate and difficult race question they can not understand. Yet this is done by *force*, in absolute indifference to the protests of the unwilling States. Thirty-four of these ratifying legislatures, elected before the Amendment was submitted and therefore lacking a mandate, acted generally in hastily called special sessions with little or no debate.

(2) Every State which voted for this amendment ceded and surrendered away an important part of its own control over its own suffrage, in obedience to an irrevocable self-executing rule.

(3) Fifteen suffrage states which ratified did absolutely nothing for their own women, who already enjoyed suffrage by state action, but, solely for the purpose of forcing woman suffrage upon other states whose people did not desire it, ceded away their own control and bound themselves by an iron rule for the future.

(4) Nearly every legislature of a non-suffrage state which ratified deliberately violated its own state constitution, which limited suffrage to males, and deliberately deprived its own people of a referendum thereon which the State Constitution required for its amendment.

(5) At least three of the suffrage states, California, Washington and Oregon, in their effort to force their policy upon distant peoples, permanently tied their own hands and bound themselves never to deny suffrage to Japanese and Chinese women born in the United States. Such surrender of an important right of local self-government for the sole purpose of coercing others 3000 miles away in their local policy is without precedent.

This action realizes the wild dream denounced by John Marshall in McCulloch v. Maryland, 4 Wheaton 316–403. At the very moment he was sustaining the full limit of National Power, he said:

> No political dreamer was ever wild enough to think of breaking down the lines which separate the States, and of compounding the American people into one common mass.

In another part of that same historic opinion Marshall said:

> But all inconsistencies are to be reconciled by the magic word "confidence." . . . . But is this a case of confidence? Would the people of any one State trust those of another with a power to control the most insignificant operations of their state government? We know that they would not.

As the Nineteenth Amendment transfers no power to withhold or grant suffrage from State to Nation, and, in fact, grants no new power to the Federal Government, except to enforce an iron rule which is "self-executing" and therefore needs no enforcement; as it partakes of the nature of "local legislation" which every State may adopt for itself and which here through the use of the Amending Clause is attempted to be imposed upon "dissenting" States; the language of Mr. Justice Brewer in Kansas v. Colorado, 206 U. S. 46, illustrates the abuse of power attempted when he says, page 97,

> One cardinal rule, underlying all the relations of the States to each other, is that of equality of right. Each State stands on the same level with all the rest. It can impose its own legislation on no one of the others, and is bound to yield its own views to none.

It also brings to mind the words of Alexander Hamilton when he quelled the doubts and fears of the members of the New York ratification convention who thought that the Massachusetts Puritans and Pennsylvania Quakers would interfere and meddle with their local habits and institutions by saying among other things:

> While the Constitution continues to be read, and its principles known, the States must, by every rational man, be considered as essential, component parts of the Union; and therefore the idea of sacrificing the former to the latter is wholly inadmissible. . . . . The gentlemen are afraid that the State governments will be abolished. But, sir, their existence does not depend upon the laws of the United States. Congress can no more abolish the State governments, than they can dissolve the Union. The whole Constitution is repugnant to it.

Even under Hamilton's persuasion New York made her ratification conditional on the insertion of what afterwards became the 10th Amendment reading:

> The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

After the Civil War in the case of Texas v. White, 7 Wall. 700, Chief Justice Chase defined an American State in the following language:

> A State, in the ordinary sense of the Constitution, is a political community of free citizens, occupying a territory of defined boundaries, and organized under a government sanctioned and limited by a written constitution, and established by the consent of the governed. It is the union of such States under a common constitution, which forms the distinct and greater political unit, which that constitution designates as the United States, and makes of the people and states which compose it one people and one country. . . .
>
> The perpetuity and indissolubility of the Union by no means implies the loss of distinct and individual existence, or of the right of self-government by the States. . . . . "The people of each State compose a State, having its own government, and endowed with *all the functions essential to separate and independent existence,*" and "without the States in union there could be no such political body as the United States." Not only, therefore, can there be no loss of separate and independent autonomy to the States, through their union under the Constitution, but it may be not unreasonably said that the preservation of the States, and the maintenance of their governments, are as much within the design and care of the Constitution as the preservation of the Union and the maintenance of the National Government. The Constitution, in all its provisions, looks to an *indestructible Union composed of indestructible States.*"

This view of the American State is borne out by the history of the adoption of the Amending Clause itself and by the insertion therein of an irrepealable limitation on the power of amendment manifestly designed to preserve in perpetuity the power of the States in the permanent legislative body created for the express purpose of representing, not the people, but those very self-governing political units which were to compose the indestructible union.

As Mr. Justice Vandevanter in speaking of this perpetual guarantee to the States says in Dillon v. Gloss, decided May 16, 1921,

> It excludes any amendment which will deprive any State, without its consent, of its equal suffrage in the Senate.

Or as the Supreme Court says in Dodge v. Woolsey, 18 Howard 348, it is a "permanent" and unalterable exception to the power of amendment.

It was the last provision of the Constitution to be adopted. The fight concerning the creation of a Senate to represent the States as a balance to the House to represent the people was over. The manner of choosing the Senators by the States themselves had been successfully established. The Pinckney plan to have the House of Representatives choose Senators from residents of the individual States had been rejected. The Wilson plan to elect Senators by Senatorial districts had also been rejected. Under these plans the Senators would not truly represent the States.

A time limit was put on certain amendments affecting slavery and representation which has long since expired.

An effort was made to exclude amendments interfering with the internal police of a state. This effort which would have excluded the 18th Amendment unfortunately failed.

It was then proposed by Governeur Morris to annex a further limitation upon the power of amendment reading:

> That no State, without its consent, shall be deprived of its equal suffrage in the Senate.
>
> This motion, being dictated by the circulating murmurs of the small States, was agreed to without debate, no one opposing it, or, on the question, saying No. 5th El Deb. (Madison papers) p. 551.

An effort to exclude navigation laws then failed and the great experiment in "representative Government," the plan for this "indestructible Union of indestructible States," was complete.

The small States had rallied again at the last and secured by unanimous vote what the writers of the Federalist afterwards called "the Palladium of their liberties."

The small States were in a minority. Their victory in securing the Senate, in controlling the election of their own Senators, in securing the autonomy of the States as self-governing communities was futile unless all three were permanently excluded from the power of amendment.

This, at the last moment, they accomplished in one short sentence, "dictated" by their circulating murmurs.

As the "Suffrage" is to perpetually remain, both the "State" to cast the "vote" and the "Senate" wherein that vote is to be cast equal to every other State, must also perpetually remain.

The clause provides not only for "equality of suffrage," but for such perpetual suffrage for an "indestructible" State in a "permanent" Senate created to represent the States.

Without an "indestructible" State the "suffrage" as well as the equality is "mythical;" without a "permanent" Senate the power of the equal vote is gone.

What a wonderfully comprehensive report is Madison's terse phrase—"dictated by the circulating murmurs of the small States."

It draws a vivid, a graphic picture of the small state delegations in personal conversation presenting their ultimatum to the others.

Dictation implies force. The only force the minority could exercise was refusal to sign without it.

So the "Palladium of their liberties" was granted. On the faith of it they signed and their States subsequently ratified.

The perpetual pledge was given. Shall it now be broken? If none other is, this clause of the Constitution was a "compact." Shall that solemn compact now be broken in the name of "Woman Suffrage"?

It is plain that a guarantee of perpetual equality of suffrage in the Senate must include the guarantee of the "suffrage" itself to the political body, the State, to which the perpetual guarantee is given and whose "indestructibility" is thereby necessarily assumed.

The Nineteenth Amendment, therefore,

(1) Destroys Maryland's "suffrage in the Senate," i.e., deprives Maryland of the right to choose her own Senators who are to cast her equal vote in the Senate *by electors of her own selection*, the only way she can exercise that right.

(2) Attacks the government of the State itself at its base, the electorate.

(3) Destroys the autonomy of the State. A State which does not control its own suffrage is not a "State" but a mere "province." Its citizens are not self-governing freemen, but helpless subjects of irresponsible outsiders.

It is equally clear that,

(4) The Constitution contemplates responsible representative government, while the dictation of a State's suffrage by irresponsible outsiders *is not an orderly responsible democratic process.* It lacks every sanction of democracy or of representative government.

(5) That to protect every State against just such outside dictation of its suffrage, which necessarily destroys its independent existence, this *perpetual* limitation on the amending power (the only irrepealable provision in the entire Constitution) was expressly inserted.

(6) That this clause is made "irrepealable" because only in that way could this be made an "indestructible union of indestructible States." It must be given a meaning which preserves the independent existence, as self-governing communities, of States which control their own suffrage. "Equal suffrage in the Senate" to a politically destroyed State is an absurdity.

(7) That nothing but "revolution" and military "force" such as brought about the 15th Amendment in the process of reconstructing the south when civil war overrode all constitutional guarantees, followed by action implying unanimous "consent," can destroy the right of any State to govern itself by choosing its own voters, under the protection of this *perpetual* guarantee unless it "consents" to its own political destruction.

(8) That even if the Nineteenth Amendment is valid in the 38 States whose legislatures were certified as having ratified, it is not valid in Maryland because she refused her "consent."

(10 States refused to "consent" to the Nineteenth Amendment.)

It is manifest that the following amendments would be illegal because they would violate the guarantee to the States of "equal suffrage in the Senate," though they all leave an "equal number of Senators":

(1) Mr. Bryan's serious proposal for a national initiative and referendum on "acts of Congress", and on "Foreign Treaties," which would bury little Delaware's "suffrage in the Senate" in the mass vote of all America, yet it still leaves her two Senators.

Pending amendments to accomplish this are proposed in Representative Emerson's House Joint Resolution No. 60, and Senate Joint Resolution No. 22, introduced by Senator Pomerene, by request.

(2) The proposal in the Socialist platform for abolishing the Senate. This would leave each State with the same number of Senators (zero).

(3) Destruction of the Senate's co-equal legislative power with the House so as to reduce it to the position now occupied by the English House of Lords, leaving two powerless Senators to each State.

(4) Transfer of the peculiar prerogatives of the Senate to "confirm appointments," to "ratify treaties," to "try impeachments," say to the House.

This would be a dismantled Senate, not the Senate in which equality of suffrage was reserved. Yet each State would still have an equal number of Senators.

Amendments now pending to change the Senate's part in treaty making are proposed in Senator Owens' Joint Resolution No. 176 and Representative Griffith's Joint Resolution No. 164.

(5) Total abolition of the States by transfer of all their powers to the Federal Government.

There would then be no "States" to enjoy "suffrage in the Senate," but mere geographical divisions (Senatorial districts) with no governmental powers would each elect two representatives in an upper house.

From the above illustrations it is clear that the proviso in Article V refers to much more than a mere "equal number of Senators."

These illustrations are self-evident to the mind from the phrase used—

State, a self-governing political entity, the residuary sovereign power under the Constitution, necessarily as such controlling its own suffrage.

Suffrage, the "vote" of such entity in the Senate.

Senate, the legislative body especially created to represent, as such, the States.

Each of the above "proposals" gives an unreasonable meaning to one or more of these words, self-evident to the mind, indicating their certain violation of the perpetual guarantee.

Why then when we read the guarantee in connection with the 19th Amendment should we accentuate the word "equal" as if that were the whole of it, defining state as a mere "geographical division," "suffrage" as the representation of such division and Senate as a body representing Senatorial Districts defined by the old State boundaries?

This makes the proviso read:

> No geographical division of the area of a State shall be deprived of its equal representation in the upper house whose members are elected by such geographical divisions.

The words "without its consent" have necessarily vanished completely. For a mere "Senatorial District" holding all its political rights on sufferance cannot "consent" in a political or other sense.

The women understand this term and that only an individuality with something to surrender can "consent."

The only term that survives such strained construction is the term "equal" and that from the context loses its original sense.

There is no escape then from the conclusion that the proviso guarantees to an "indestructible" State which con-

trols its own suffrage a perpetual equal vote in a "permanent" Senate.

The perpetual guarantee is clearly violated by the Nineteenth Amendment, which is void at least in States which refused to "assent" thereto, unless we give to the words of the proviso a new and strange meaning hitherto unknown in American Constitutional Law—a meaning which would permit (1) the destruction of the States; (2) the destruction of the Senate.

Such construction would write out of the Constitution and render of no value to the States or to the people this "Palladium of their liberties." In other words, it would permit the destruction of "local self-government" in America.

> It would be a strange rule of construction that language granting powers is to be liberally construed and that language of restriction is to be narrowly and technically construed. . . . . The true spirit of constitutional interpretation in both directions is to give full, liberal construction to the language, aiming ever to show fidelity to the spirit and purpose.

Kansas v. Colorado, 206 U. S. 46, p. 91. Fairbanks v. U. S., 181 U. S. 283.

If the Nineteenth Amendment is legal it is permissible, by Constitutional Amendment to force the people of any State against their will.

(1) To limit their franchise to "Proletarians" or "Property holders" or "Protestants" or "Roman Catholics."

(2) To wipe out their reasonable regulations excluding resident foreigners and their local limitations as to age, domicile, literacy, payment of taxes and the like.

There is no middle ground. If irresponsible outside dictation of a State's suffrage is permissible at all it has no legal limits.[1]

[1] Senator Sherman of Illinois, in his Senate Joint Resolution No. 21, proposes to abolish for National Elections the "poll tax," "property," "understanding" and other special requirements of many States as well as Maryland's "State Naturalization" system sustained as legal in Pope v. Williams 193 U. S. 621, and to make reading and writing with but one year's residence, less than that required by many States, the test.

It should never be forgotten that the Southern States which were in rebellion were first compelled to establish irrepealable negro suffrage in their State Constitutions and then to "consent" to and "ratify" the Fifteenth Amendment. They did, in fact, thus formally "consent" to it, as part of the terms of Peace and Reconstruction, stipulated by Congressional Act, as the condition to, and price of, resuming their representation in Senate and House. While the few remaining States in the North which had rejected it acquiesced therein and permitted their negro citizens to vote thereunder without contest for more than 40 years. The Fifteenth Amendment therefore can hardly be called a violation of the perpetual guarantee. The interference of the State's "suffrage in the Senate" thereby, was "consented" to, in one way or another, by every one of the States of the Union.

This does not violate but conforms to the terms of the "perpetual guarantee." The proviso itself expressly permits any State to "consent" to an amendment interfering with its suffrage in the Senate.

Acquiescence will not ordinarily make good a violation of the Constitution or prescription make an unconstitutional law valid.

But that is not what we are dealing with here. Here "consent" expressly keeps it from being a violation and expressly makes it legal within the State so consenting.

Surely such "consent" can reasonably be *implied* from formal submission to the command of an amendment and implicit obedience to its terms for nearly two generations.

After permitting the negro to vote in Maryland for 40 and odd elections neither Maryland nor any of her citizens could be heard to say that Maryland had not "consented" to the Fifteenth Amendment.

In Myers v. Anderson, 238 U. S. 368, the Supreme Court rightly ignored that claim (if indeed it was directly made) and assumed the amendment valid, referring to the fact that the Court of Appeals of Maryland itself had come to recognize its validity in Maryland.

The "consent" of particular states necessarily and rightly implied from long continued acquiescence in an amendment affecting their "suffrage in the Senate" is totally different from making an illegal amendment legal by prescription, or from applying a rule of limitations to a Constitutional violation.

Maryland's failure to stand on her right to veto the Fifteenth Amendment within Maryland, followed by her affirmative act of enfranchising her negroes and continuing so to do for 40 years, conclusively implied her "consent" thereto.

The acquiescence of Maryland and a few Northern States implying their legal "consent" to the Fifteenth Amendment, thus making it valid within their boundaries, did not and can not destroy the perpetual guarantee in Article V or make legal in Maryland an amendment violating its provisions to which she *has not consented*, and as against which a legal contest is promptly raised by certain of her citizens comprising the Maryland League for State Defense and carried to the Supreme Court for adjudication.

The public unfortunately seems to look upon amending the Constitution as a convenient method of legislating, particularly for forcing local legislation upon unwilling sections. That was natural perhaps in the case of the three war amendments when not only the South but the whole country was "reconstructed" for the benefit of the negro. But except as part of a revolution it has no excuse or justification.

Such method of passing "local legislation" by constitutional amendment is in practice unworkable as a means of expressing the popular will. It lacks the ordinary sanction of democracy and of representative government, responsibility to the people affected.

The 15 suffrage states had woman suffrage for themselves and their legislatures had no democratic sanction to force it on other sections. The people of the 23 "male" suffrage states which ratified could all have procured woman suffrage for themselves without interfering with the people of other

States, by the orderly process of amending their own State Constitutions. If their own people did not desire it, as in the case of the people of 13 such States who had refused on referendum to strike the word "male" from their State Constitutions, then their legislators' action in voting to ratify was an outrage on their own people, besides being a violation of their official oaths.

The thing is necessarily and on its face an irresponsible political agency. It will never be possible for the legislator (or the citizen either for that matter) of California or Texas to fairly and justly pass local legislation for the citizen of Maryland and New York or vice versa.

Except the war and reconstruction amendments whose legal sanction rests on revolution, force under the war power, and subsequent "consent" implied from long continued acquiescence, the Nineteenth Amendment is the first amendment which

(1) overrides any State Constitution.

(2) accomplishes a "reform" which orderly State action could have accomplished.

The limitations on Federal power by the first ten (the Bill of Rights); preventing suit by a citizen of one State against another State (the eleventh); changing the method of electing the President (the twelfth); levying an income tax without apportionment (the sixteenth); changing the election of Senators to popular vote (the seventeenth); and establishing prohibition of liquor *in foreign and interstate commerce* as well as locally (the eighteenth); all required the use of the amending clause for their accomplishment. None could have been brought about, as could woman suffrage, by State action. *None of these not even the eighteenth* (for no State Constitution prohibited Prohibition) *violated or amended by an extraneous method any State Constitution.*

This is the first time that it has been suggested that this could be done except under the war power as a term of reconstruction in settlement of the issue of the great rebellion.

It makes the State legislature, when exercising the amending power, greater and superior to the State Constitution which gives it being. It gives the legislature when ratifying all the sovereign powers of the people themselves heretofore enjoyed only by a State Constitutional Convention.

The original constitution was submitted to State Conventions because the legislatures were not considered competent.

As Madison expressed it:

> It would be a novel and dangerous doctrine that a legislature could change the constitution under which it held its existence. El. Deb. Vol. 5, p. 355.

Under this "novel and dangerous" doctrine safeguards to such local institutions as "property" or "marriage" provided in State Constitutions can be set aside by the unrestrained action of the legislatures in ratifying a Federal Amendment.

By a sort of Baron Munchausen effect the State Legislatures raise themselves by their own boot straps. The creature becomes greater than the creator. The legislature destroys the instrument which gives it existence.

The natural and inevitable limitation upon the power of a State Legislature not to violate or destroy the State Constitution which creates it, is totally unlike the operation of the Ohio Referendum provision declared illegal in Hawke v. Smith, 253 U. S. 221.

That did not limit or control the action of the Ohio Legislature, which was to proceed as before, to ratify or reject. It attempted to add a new condition in conflict with Article V providing the legislative ratification should not count unless approved by popular vote. This attempted to modify the term "legislature" in Article V by including something else therein not contemplated by the framers.

The framers used the term "legislature" as it then and had always described "the legislative body which made the laws for the people," restrained, as it always had previously been, and was then, by the organic law of its own creation.

In using that familiar term they certainly were not creating a new and unheard of political agency and clothing it with new and unheard of powers to act without political restraint of any kind, which power no State legislature had heretofore possessed. Because of the "legislature's" inherent and necessary inability to ratify amendments like this, which overturned State Constitutions, an alternative method of ratification by State Conventions was provided. These State Conventions, specially elected for the purpose, do possess and have always possessed such unlimited power, the whole power of the sovereign people themselves.

In contemplation of law these conventions *are* the people—in conventions assembled. The framers of the Constitution knowing, and appreciating that State Legislatures then existing were not competent to ratify the original Constitution, that it would be extremely dangerous to entrust them with any such power, did not certainly, in terms, undertake to confer any such power upon them in Article V. That Article merely says Congress shall have the power to propose amendments which *when* ratified by the Legislatures of three-fourths of the States or when ratified by Conventions, etc. . . . . shall become a part of the Constitution.

It could never have been intended by this language to enlarge the power of State Legislatures in the matter of amending their own State Constitutions by ratifying Federal amendments which would have that effect. As it was the evident intention to leave the question of "*when*" if *ever* its legislature should ratify a proposed amendment to the State itself, and in States where the people have provided in the State Constitution against any amendment thereof by their legislature, they must be deemed to have forbidden that Legislature *ever* to ratify such an amendment as the Nineteenth. If they have the power to say "when" obviously they have the power to say "never," and if Congress choses to propose an amendment of that kind, it must provide for its submission to State Conventions.

The State Constitutions provide when and how the "leg-

islatures" shall meet to ratify Federal Amendments. A violation of those provisions would plainly vitiate a ratification attempted otherwise, say by a legislature meeting like a mob at its own call. Plainly then no legal provision in a State Constitution can be violated by a "legislature" in ratifying a Federal Amendment. If one is binding all must be. No clause in any State Constitution limiting suffrage to males was inconsistent with or in violation of the Federal Constitution.

The legislators of Ohio neither violated the "referendum Clause" of the Ohio Constitution nor their official oaths to support it when they voted to ratify, but they did violate, and seek to amend by indirection, the "male" clause, as did 22 other State legislators.

Whatever the Courts say about the legality of the Nineteenth Amendment and its method of ratification, the people of the United States and particularly the students of the Constitution ought to be made aware of the radical destruction of "local self-government," the drift away from the "Home Rule Plan of the Constitution," with the incidental setting up of new and unrestrained powers in State legislatures when ratifying Federal Amendments, which is taking place.

Strange to say, this is all happening practically without comment by the Press of the country and largely unnoticed by the leaders of public thought and moulders of public opinion, in school, in college and in public life.

In Barron v. The Mayor and City Council of Baltimore, 7 Peters 243, the Supreme Court held the first ten amendments (The Bill of Rights) were limitations upon the Federal Government and not upon the State Governments.

Among other things Chief Justice Marshall said that:

> The Constitution was ordained and established by the people of the United States for themselves, for their own government and not for the government of the individual States.

(The Nineteenth Amendment is nothing short of the use of the Amending Clause "for the government of the individual States.")

Later speaking of the States he adds:

In their several Constitutions they have imposed such restrictions on their respective governments as their own wisdom suggested; such as they deemed proper for themselves. It is a subject on which they judge exclusively and with which others interfere no farther than they are supposed to have a common interest. The counsel for the plaintiff insists that the constitution was intended to secure the people of the several states against the undue exercise of power by their respective governments; as well as against that which might be attempted by their general government." . . . .

Disposing of that argument and speaking of the express restrictions on State legislation, he uses the following expression:

They will be found, generally, to restrain State legislation on subjects entrusted to the government of the Union, in which the citizens of all the states are interested. In these alone were the whole people concerned.

(Power to regulate, grant, or withhold suffrage is not by the 19th Amendment or otherwise "entrusted to the government of the Union." Moreover, the people of Texas, California and Maine are not concerned with whether the women of Maryland vote or not.)

He then uses this significant language:

Had the people of the several states, or any of them, required changes in their constitutions; had they required additional safeguards to liberty from the apprehended encroachments of their particular governments; the remedy was in their own hands, and would have been applied by themselves. A convention would have been assembled by the discontented state, and the required improvements would have been made by itself. The unwieldy and cumbrous machinery of procuring a recommendation from two-thirds of Congress, and the assent of three-fourths of their sister states, could never have occurred to any human being as a mode of doing that which might be effected by the state itself. Had the framers of these amendments intended them to be limitations on the powers of the state governments, they would have imitated the framers of the original constitution, and have expressed that intention. Had Congress engaged in the extraordinary occupation of improving the constitutions of the several states by affording the people with additional protection from the exercise of power by their own govern-

ments in matters which concerned them alone, they would have declared this purpose in plain and intelligible language.

Marshall considered that the use of the amending clause "could never have occurred to any human being as a mode of doing that which might be effected by the State itself" and scoffed at the idea of Congress being engaged "in the extraordinary occupation of improving the constitutions of the several states . . . . in matters which concerned them alone."

Therefore he would certainly have construed the Nineteenth Amendment as consistent with the terms of the perpetual proviso in Article V and as intended only to operate in the States which "consented" thereto and consequently as not intended to invade the local suffrage, and incidentally the "suffrage in the Senate," of the States which refused to "consent." Such construction preserves the proviso intact while sustaining the amendment. It preserves the "self-government of the States" which the Nineteenth Amendment otherwise destroys.

To have been operative in Maryland and the 9 other dissenting States the Nineteenth Amendment should have necessarily contained express language amendatory of the proviso in Article V, in which case it would have required unanimous "consent," as the proviso itself is only repealable with the "consent" of all the States.[2]

The statement of a Constitutional principle is intended to be for all time.

The very permanency and practical irrepealability of such a Constitutional Amendment illustrates the inadaptability of the use of the amending clause, as a local legislative agency.

Irrepealable local legislation might have been fit for the Medes and Persians. It has no place in the democratic government of an American State.

[2] For a startling list of "Proposals to amend the Federal Constitution" now pending in Congress affecting all sorts of subjects, including the destruction of the State system of "marriage and divorce" now exclusively a local institution, see the *Constitutional Review* for January, 1921.

No State legislature can so part with its powers as to pass an irrepealable State Law not in the nature of a contract (Cooley Const. Lim. 7th Ed. Ch. VIII, p. 295).

It is therefore going far afield to assume that Article V grants State Legislatures power, in conjunction with the legislatures of other States, to destroy in whole or in part the sovereignty of their own people over "suffrage."

Legislation is necessarily flexible, adjustable to the changing temper and desires of the people. Its mistakes can be corrected from time to time. A Federal Amendment which merely changes the source of power from State to Nation still permits repealable legislation by the Congress, but an amendment such as the 19th in effect fixes an iron irrevocable rule.

It might be in accord with a momentary popular desire, But suppose that desire changes. The people then find themselves in a political straightjacket binding them to local legislation, which they have come to detest and which a small sectional mimority of 13 States, perhaps not affected by it, can keep fastened upon them forever.

This destructive effect, which can not be minimized, makes a strong presumption against the intention to grant any such power.

It certainly brings home the truth that, to so use the amending clause as a "Force Bill," for "local suffrage" threatens the continuation of responsible, orderly democratic government.

The framers doubtless realized that the dictation of a State's suffrage by irresponsible outsiders is not an *orderly responsible democratic process.* That it lacks every sanction of democracy or of representative government. And inserted the perpetual limitation on the amending power as the only way to preserve our dual system, composed of "an indestructible Union of indestructible States," and make both the Union, and the "States" without which the Union ceases to exist, incapable of destruction, except by unanimous consent.

Of the 38 State Legislatures counted as ratifying the

Suffrage Amendment only 4 were elected *subsequent* to its proposal by Congress.

When the citizen votes for a member of a State Legislature upon one set of issues then pending must he be presumed to have delegated to the legislator blanket authority, during his whole term of office to amend his State Constitution upon any and every subject matter involved in any Federal Amendment which may be *subsequently* proposed by Congress? Certainly not.

He certainly never authorized such legislator to thus disfranchise him or to dilute his vote by enfranchising others.

On the other hand when the citizen votes for members of a State Convention newly called to act in his name upon a Federal Amendment necessarily previously submitted, the issue is direct and certain and the popular mandate complete.

This would seem to demonstrate conclusively that if unanimous consent is not required then the alternative method provided in Article V for ratification *by the people of the United States themselves* assembled in State Conventions, the only way they can act directly in their sovereign capacity, (McCulloch v. Maryland, 4 Wheaton 316) is alone applicable to Federal Amendments changing suffrage provisions of State Constitutions. Otherwise we leave the American track of orderly, responsible, democratic government.

The question of Woman Suffrage itself falls into relative insignificance. It has really nothing to do with the question under discussion. It cannot be considered by the Court in deciding the Constitutional questions involved in the pending litigation, although incidentally it happened to be the cause of the assertion of these new powers, which, if now firmly established, will be more and more asserted in such revolutionary fashion to accomplish other ends.

Addendum. On November 14 the Supreme Court granted the motion to advance and set the suffrage cases Fairchild v. Hughes, no. 148; and Leser v. Garnett, no. 553 for oral argument on December 5.

THE EPIC OF ALL OUT-DOORS

By BENJAMIN IVES GILMAN, M.A. (Hon.), 1902
Secretary, Museum of Fine Arts, Boston, Massachusetts

DANTE'S first journey took him to the center of the earth, and through it to the ocean of the antipodes; his second to the highest point of the only land in that sea; his last to the moon, the sun, the planets, the stars, and the encompassing heaven of heavens. In Hell and Purgatory he passes through gates, but he never goes indoors. Since the whole of space without is either upon the earth, inside it, or beyond it, the Divina Commedia is literally an epic of all out-doors.

No other epic is. The theatre of the Homeric poems, the Aeneid, Paradise Lost, the Ramayana, and the Mahabharata, is the inhabited world about the poets, with its palaces and forest shelters; and of this the infernal and supernal regions were the indefinite or fanciful extension. Dante alone placed both within the real universe as the science of his time conceived it, and divided it all between them, apart from the habitations of men. As we might follow the real Bunyan and find the Delectable Mountains in the Lake Country or Doubting Castle in some keep in Wales, so we can follow the real Dante and find the scenery of the Commedia in the whole uninhabited earth, the sea, and the sky as these appeared to him from Italy.

We do not think of Dante, the product of the thirteenth century, as a man of the open air. Petrarch, the product of the fourteenth century, is called the first lover of nature. Yet the Divina Commedia was written in exile; and to be a wanderer then meant to live in the open as it does not now. It meant to walk or ride beneath the sky, with the sunrise as summons, the sunset as warning, the stars as guides; with mountains to overcome, the sea to wonder at, the forest to dread, the storm to fly before, the flowers and herbs to

rest among, the brooks to drink from, the birds to listen to, the animals to observe, the peasant or traveller to watch or overtake. Though but one stage of Dante's fancied journey, the ascent of the mountain of Purgatory, could have reflected throughout a real experience, the whole recital is proof that the world of the open was in his mind an exhaustless storehouse of bewitching memories. An accent of adoration for natural beauty and sublimity runs like the burden of a song through all the melodies and harmonies of the Divina Commedia.

Similes drawn from the life of the woods and the fields abound throughout the poem. The souls of the lost fly from the bank of Acheron

> *As in the autumn the leaves fly away*
> *One and another, till at last the bough*
> *Sees on the earth the sum of all its spoils.*[1]

On the Stygian marsh they scatter in terror before a messenger from heaven, flying to the aid of Dante and Virgil like a thundercloud with a sound

> *Not other in its make than that of wind*
> *Impetuous because of the opposing heats,*
> *That strikes the forest, and without respite*

---

[1] Come d'autunno si levan le foglie
L'una appresso dell'altra, infin che il ramo
Vede alla terra tutte le sue spoglie.
—*Inferno* III 112–114.

The present versions of Dante's lines show their indebtedness to previous translators. It is true that in the best translation a poet's beautiful thoughts appear travestied in a verbal dress never chosen for them, like a shipwrecked crew in contributed clothing. What then? Are the poets to remain wholly unknown except to those who read their languages? The words of the original are here added both to test and to supplement the versions.

Shatters and fells and bears away the branches:
Before it there advances towering dust,
And puts to flight the wild things and the shepherds.[2]

A lost soul pursued by a demon escapes by immersing himself in the ditch to which he is condemned:

Not otherwise the wild duck suddenly,
If the hawk but approach, dives headlong down,
And he soars up in anger and defeat.[3]

This precise drama occurred one sunny noonday years ago on the west branch of the Penobscot; and the hero was all the more a hero because a kingfisher and not a duck. Down through the green aisle of the river came the two birds, the larger rapidly gaining on the smaller. Just opposite the witness the kingfisher dropped out of sight in the water, leaving the hawk desperately waving his wings over the widening ripples. A wee head appeared, and the hawk plunged at it; but he was too late, and rose in circles above the spot. The instant his back was turned the head reappeared and the kingfisher was off down stream like an arrow. The hawk made a feint to follow but a feint only, and flew heavily up stream *crucciato e rotto*—sullen and broken—as Dante wrote.

In Purgatory, a group of penitent souls alarmed at the

[2] Non altrimenti fatto che d'un vento
Impetuoso per gli avversi ardori,
Che fier la selva, e senza alcun rattento
Li rami schianta, abbate, e porta fuori:
Dinanzi polveroso va superbo,
E fa fuggir le fiere e li pastori.
—*Inferno* IX 67–72.

[3] Non altrimenti l'anitra di botto,
Quando il falcon s'appressa, giù s'attuffa,
Ed ei ritorna su crucciato e rotto.
—*Inferno* XXII 130–132.

shadow cast by Dante's living body meet him with hesitation:

> *Just as the sheep come forth from out the fold*
> *By ones and twos and threes, and the others stand*
> *Fearsome, their eyes and muzzles toward the ground;*
> *And that which the first does the others do,*
> *Backing themselves against her if she stop,*
> *Quiet and innocent, the wherefore knowing not.*[4]

In Paradise Dante sees one saint greet another

> *As when the dove descends and comes to rest*
> *Beside its mate, and each to each outpours,*
> *Circling and cooing, its affection.*[5]

This simile was not the only gem with which its subject was to enrich Italian art. Two centuries later, Andrea della Robbia created a masterpiece of sculpture in his relief of the meeting of S. Dominic and S. Francis.

In the descriptive passages of the Inferno and the Purgatorio Dante gives a connected and often detailed picture of the scenery of his journey. The poem begins with a day in the woods. It is Good Friday, April 8, 1300. At the end of a dark valley where Dante has wandered all night, he is cheered by the first sunlight bathing the shoulders of the slope before him. He starts upward, but a leopard meets

[4] Come le pecorelle escon del chiuso
Ad una, a due, e tre, e l'altre stanno
Timidette, atterrando l'occhio e il muso;
E cio che fa la prima, e l'altre fanno,
Addossandosi a lei s'ella s'arresta,
Semplici e quete, e lo 'mperche non sanno:
—*Purgatorio* III 79–84.

[5] Si come quando il colombo si pone
Presso al compagno, e l'uno all'altro pande,
Girando e mormorando, l'affezione:
—*Paradiso* XXV 19–21.

him and he hesitates. The sun rises attended by the morning stars

> *those stars*
> *That were about him when the Love divine*
> *At first in motion set those beauteous things;*[6]

Dante takes heart again, but the leopard is joined by a wolf and a lion, who drive him back into the shadow.[6a] There a pallid form appears. It is Virgil, who tells Dante of his heaven-appointed journey among the lost and saved. Day passes and night overtakes them as they set off together.

> *Day was departing; and the darkening air*
> *Released the living things that are on earth*
> *From their fatigues; and I alone and one*
> *Made myself ready to sustain the siege*
> *Both of the way and of compassion.*[7]

Past the dark portal that admits them to the earth the travellers encounter few reminders of the outer air, and these in lurid and terrible forms. In Limbo, the abode of pagan worthies, pleasant fields about a castle are mysteriously illuminated; but in the cavernous immensities beyond the only light is given by flames or the glowing prisons of the lost. Descending a vast precipice, Dante notes that the loosened rocks move under the unaccustomed weight of living feet:

> . . . . quelle stelle
> [6] Ch' eran con lui, quando l'amor divino
> Mosse da prima quelle cose belle;
> —*Inferno* I 37–40.

[6a] *Jeremiah* v: 6.

> [7] Lo giorno se n'andava, e l'aer bruno
> Toglieva gli animai che sono in terra
> Dalle fatiche loro; ed io sol uno
> M'apparecchiava a sostener la guerra . . . .
> Sì del cammino e sì della pietate,
> —*Inferno* II 1–5.

Such is that landslide that upon the flank
Smote on this side of Trent the Adige—
Whether by earthquake or withdrawn support—
For from the mountain summit whence it moved
Down to the plain the rock is so torn out
That it would give a path to one above.[8]

The place is now known as the *Slavini di Marco,* and it can hardly be doubted that Dante had himself tested the slide as a trail during some visit to the nearby castle since called *Castello di Dante.* The parenthetical line marks his insatiable scientific curiosity. The second alternative—the decay of underlying strata—is now the accepted theory of the fall of the mountain.

The course of the travellers downward continues a dizzy adventure with fathomless precipices and dismembered crags. Halfway over a precipitous ridge that bars their further descent, Virgil's acts and words bespeak the practised rock-climber.

He spread his arms, after a little counsel
Taken with himself, and, scanning first of all
Attentively the cliff, took hold of me;
And, like a man who acts and thinks at once,
Appearing always on the look-out forward,
So upward raising me toward the top
Of a great pinnacle, he saw another
And said, "Fasten yourself on that one next,
But try beforehand whether it will bear you."

---

[8] Qual è quella ruina che nel fianco
Di qua da Trento l'Adice percosse
O per tremuoto o per sostegno manco,
Che da cima del monte, onde si mosse,
Al piano è si la roccia discoscesa,
Ch'alcuna via darebbe a chi su fosse:
—*Inferno* XII 4–9.

No way it was for anyone encumbered,
For hardly we, he light, and I helped onward,
Were able to mount up from ledge to ledge.[9]

Of his journey onward and upward from the centre to the surface of the earth Dante gives no particulars. The travellers follow the windings of a crevice worn in the rock by a rivulet and on Easter morning, April 10, 1300, emerge upon the shore of a great island mountain.

A lovely tint of oriental sapphire
Gathering itself within the clarity
Of air even unto the horizon pure
Delight engendered in my eyes again,
Soon as I passed from the dead atmosphere
That had so saddened for me eyes and breast.
The beauteous planet that inspires to love
Was making the whole eastern heaven laugh
Veiling the constellations in her train.
I turned to the right hand and fixed my mind
Upon the other pole and saw four stars
By none before but our first parents seen.[10]

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[9] Le braccia aperse dopo alcun consiglio
Eletto seco, riguardando prima
Ben la ruina; e diedemi di piglio.
E come quei che adopera ed estima,
Che sempre par che innanzi si proveggia:
Cosi, levando me su vêr la cima
D'un ronchion, avvisava un'altra scheggia,
Dicendo: "Sovra quella poi t'aggrappa;
Ma tenta pria s' e tal ch' ella ti reggia"—
Non era via da vestito di cappa,
Che noi a pena, ei lieve, ed io sospinto,
Potevam su montar di chiappa in chiappa.
—*Inferno* XXIV 22–33.

[10] Dolce color d'oriental zaffiro,
Che s'accoglieva nel sereno aspetto
Dell' aer, puro infino al primo giro,
Agli occhi miei ricominciò diletto,
Tosto ch'i'uscii fuor dell'aura morta,
Che m'avea contristato gli occhi e il petto.

—for Eden lay on the summit of the mountain before him. Were not these stars the brilliant four named afterward the Southern Cross? The commentators deny it, calling them an allegory of the pagan virtues and pointing to Dante's last line; but a believer at once in his ingenious intricacy of thought and in his passion for the actual sky may continue to doubt. In Dante's time and land these stars were perhaps but a faint tradition brought from faraway.

In the distance Dante catches sight of the calm ocean surrounding the island.

> *The dawn was conquering the morning shade*
> *Which fled before it so that from afar*
> *I recognized the trembling of the sea.*[11]

The summit of the mountain is hidden, not by clouds, for none form in its sacred air, but by beetling cliffs about its base. Thoughts of Italian steeps, such as live in every traveller's memory, crowd upon Dante's mind.

> *San Leo one can reach, descend to Noli,*
> *Mount to the summit of Bismantova*
> *Upon one's feet; but here a man must fly.*[12]

Lo bel pianeta che ad amar conforta,
Faceva tutto rider l'oriente,
Velando i Pesci ch'erano in sua scorta.
Io mi volsi a man destra, e posi mente
All'altro polo, e vidi quattro stelle
Non viste mai fuor che alla prima gente.
—*Purgatorio* I 13–24.

[11] L'alba vinceva l'ôra mattutina
Che fuggia innanzi, sì che di lontano
Conobbi il tremolar della marina.
—*Purgatorio* I 115–117.

[12] Vassi in Sanléo, e discendesi in Noli:
Montasi su Bismantova in cacume
Con esso i piè; ma qui convien ch'uom voli;
—*Purgatorio* IV 25–27.

San Leo is a village and Bismantova a stronghold in the central Apeninnes, where from any valley the hamlets and the towers seem to hang in the sky; and Noli is a fishing port in the Riviera, where from any height it seems possible to throw a stone into the sea.

The travellers circle the mountain in vain. On the eastern shore a group of penitent souls await their dolorous climb to Paradise, and by them directed Dante and Virgil find and with difficulty enter a little crevice at the foot of the cliff.

A larger opening often hedges up
With but a little forkful of his briars
The vineyard helper when the clusters darken.[13]

Mounting within the rock they emerge upon its face, inclined, as Dante is careful to record, at more than forty-five degrees. Thence they descry and finally reach a ledge where they can seat themselves with the shore in sight.

For it is wont to help one to look back[14]

as every mountain climber knows.

Through the day they climb on, talking with each other or with the shades they meet.

Nor talk our pace, nor pace our talk delayed
But reasoning together on we sped
Like ships urged forward by a favoring wind.[15]

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[13] Maggiore aperta molte volte impruna
Con una forcatella di sue spine,
L'uom della villa, quando l'uva imbruna,
—*Purgatorio* IV 19–21.

[14] Chè suole, a riguardar, giovare altrui.
—*Purgatorio* IV 54.

[15] Né il dir l'andar, né l'andar lui più lento
Facea; ma ragionando andavam forte,
Sì come nave pinta da buon vento.
—*Purgatorio* XXIV 1–3.

Toward evening they reach a cup-like hollow in the mountainside, where the herbage is colored like

The emerald when it is freshly broken.[16]

and where flowers exhale the mingled sweetness of a thousand odors.

'Twas now the hour that sways the fond desire
Of those that sail in ships, and melts the heart
The day they've bid beloved friends adieu;
And that the pilgrim, just set out, to love
Awakens, if he hear a bell afar
That seems as if it wept the dying day.[17]

Overcome by a fatigue that Virgil cannot feel, Dante at length sinks upon the grass, as a false dawn announces the rising of the moon. The real Aurora, herald of the Sun, was the fabled bride of Tithonus; her counterfeit, the herald of the moon, now rises among the stars of the Scorpion, led by the ruby Antares.

The concubine of the antique Tithonus
Gleamed white on the proscenium of the East,
Already, from her dear friend's arms away;
With jewels did her forehead brightly shine
Set in the shape of that cold-blooded beast
That with his tail strikes at the sons of men.[18]

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[16] Fresco smeraldo in l'ora che si fiacca.
—*Purgatorio* VII 75.

[17] Era già l'ora che volge il desio
Ai naviganti, e intenerisce il core
Lo di che han detto ai dolci amici addio;
E che lo nuovo peregrin d'amore
Punge, se ode squilla di lontano,
Che paja il giorno pianger che si more:
—*Purgatorio* VIII 1–6.

[18] La concubina di Titon antico
Gia s'imbiancava al balco d'oriënte
Fuor delle braccia del suo dolce amico:

All the next day the travellers climb from cornice to cornice. At length a mystic cloud envelops them, and in describing their passage through it, Dante invokes the reader's own recollections of the dazzling and fleeting mists of high mountains.

Remember, reader, if upon an alp
A mist e'er caught you, through which you could see
Not otherwise than moles see through their skin,
How, when the vapors watery and dense
Begin to dissipate themselves, the circle
Of the sun's face but weakly pierces through;
And your imagination will be quick
In catching sight of how I saw again
The sun at first, now just about to set.
So timing mine unto the faithful steps,
My master's, I emerged from such a cloud
Into the rays now dead on the low shores.[19]

The twilight bow that rises on the eastern sky, revealing the first stars as the sun sinks below the west, passes unnoticed by many of us; but Dante gives its scientific explanation as the shadow of the earth against a clear heaven.

Di gemme la sua fronte era lucente,
Poste in figura del freddo animale,
Che con la coda percuote la gente:
—*Purgatorio* IX 1–6.

[19] Ricorditi, lettor, se mai nell' alpe
Ti colse nebbia, per la qual vedessi
Non altrimenti, che per pelle talpe;
Come, quando i vapori umidi e spessi
A diradar cominciansi, la spera
Del sol debilemente entra per essi;
E fia la tua immagins leggiera
In giugner a veder, com' io rividi
Lo sole in pria, che già nel corcare era.
Si, pareggiando i miei co' passi fidi
Del mio maestro, uscii fuor di tal nube
A' raggi, morti già nei bassi lidi.
—*Purgatorio* XVII 1–12.

Already were above us so upraised
The latest beams, precursors of the night,
That the stars showed themselves on many sides.[20]

The night until moonrise is again spent in earnest talk; and it is late the next day when Dante wakes.

I rose up; and already all were full
Of day the windings of the sacred mount.[21]

On the topmost cornices the travellers hug the inner wall as if it were a battlement, and when this becomes impossible and Dante fears to fall, Virgil, like a wise mountaineer, exhorts him to keep close watch upon his eyes. From the last cornice a stairway hewn in a cleft of the rock leads to the summit of the Mountain and Paradise. On this high perch they spend the night, joined by another shade, and Dante lingers, as if over pleasant memories of his own, in describing their bivouac among the stars.

Straight upward climbed the path within the rock,
That westward looked, for I my shadow cast
Before me from the low descending sun
And but few steps only we had tried
When the sun's setting by the extinguished shade
Behind we knew, I and my sages both.
And ere in all of its immense extent
The horizon was of one appearance made
And night had all its dispositions ta'en
Each of us made a single step his bed.
* * *
On either hand bound in by the deep cleft.

---

[20] Già era sopra noi tanto levati
Gli ultimi raggi che la notte segue,
Che le stelle apparivan da più lati.
—*Purgatorio* XVII 70–72.

[21] Su mi levai. E tutti eran già pieni
Dell' alto dì i giron del sacro monte,
—*Purgatorio* XIX 37–38.

But little showed there of what was without
Yet through that little I beheld the stars
More luminous and larger than their wont.
So ruminating and upon them gazing
Sleep overcame me.[22]

Awakened for the last time by the dawn, the companions spring to the top of the stairway and find themselves in a wooded plain covering the summit of the mountain. There Virgil bids farewell. With the beginning of Dante's heavenly journey Beatrice is to become his guide. Alone Dante advances among the trees.

Happy to wander into and about
The sacred forest thick and vigorous
That tempered to the eyes the newborn day,
Without delaying more I left the brink
And went on slowly through the rural scene
Over a soil sweet-scented everywhere.
A wind both gentle and unvarying
Within itself, struck me upon the forehead
With but the touch of a caressing breeze;

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[22] Dritta salía la via per entro il sasso
Verso tal parte, ch'io toglieva i raggi
Dinanzi a me del sol ch'era già basso.
E di pochi scaglion' levammo i saggi,
Che il sol corcar, per l'ombra che si spense,
Sentimmo dietro ed io e li miei saggi.
E pria che in tutte le sue parti immense
Fosse orizzonte fatto d'un aspetto,
E notte avesse tutte sue dispense,
Ciascun di noi d'un grado fece letto;
* * * *
Fasciati quinci e quindi d'alta grotta.
Poco potea parer lì del di fuori;
Ma per quel poco vedev'io le stelle,
Di lor solere e più chiare e maggiori.
Sì ruminando, e sì mirando in quelle,
Mi prese il sonno; . . . . . .
—*Purgatorio* XXVII 64–73; 87–92.

By which the twigs, trembling in readiness
Together, were in that direction bent
Where casts its shadow first the sacred mount;
Still not departing from their upright pose
So far, that in their tops the little birds
Left off the exercise of all their art;
But full of gladsomeness the early hours
Welcomed with carolling among the leaves
That held a counterpoint against their songs
Like that which sums itself from bough to bough
Through the Pineta on the Chiassi Shore,
When Eolus lets the Scirocco forth.[23]

This single terzetto has brought many a traveller to the stately pinewood on the Adriatic near Ravenna, there to listen to the murmur that inspired it.

Up to the last descriptive sentence of the Purgatorio Dante does not forget that he is on a mountain top. Over the clear fountain whose waters cleanse the spirit for its flight from the earthly to the heavenly Paradise, there spreads

[23] Vago già di cercar dentro e dintorno
La divina foresta spessa e viva,
Che agli occhi temperava il nuovo giorno,
Senza più aspettar lasciai la riva,
Prendendo la campagna lento lento
Su per lo suol che d'ogni parte oliva.
Un'aura dolce, senza mutamento
Avere in sè, mi feria per la fronte
Non di più colpo che soave vento;
Per cui le fronde, tremolando pronte,
Tutte quante piegavano alla parte
U'la prim'ombra gitta il santo monte:
Non però dal lor esser dritto sparte
Tanto, che gli augelletti per le cime
Lasciasser d'operare ogni lor arte;
Ma con piena letizia l'ôre prime,
Cantando, ricevièno intra le foglie,
Che tenevan bordone alle sue rime,
Tal, qual di ramo in ramo si raccoglie
Per la pineta in sul lito di Chiassi,
Quand' Eolo Scirocco fuor discioglie.
—*Purgatorio* XXVIII 1–21.

a pallid shade
Such as beneath green leafage and black boughs
Upon its frigid rivers the alp bears.[24]

The natural scenery of the Commedia here ends. The progress of Dante and Beatrice through heaven after heaven is told as a passage through undefined spheres of ever brighter light and laughter. But here, as everywhere in the poem, the real sky supplies its metaphors.

And just as at the rising of first night
Commence in heaven new appearances
So that the sight both seems and not seems true;[25]

thus a heavenly host gather; and later their leader appears

As in clear evenings when the moon is full
Trivia laughs amid the timeless nymphs
Who paint the firmament in all its depths.[26]

Elsewhere in contrasting withered age and radiant youth Dante thinks of the old moon in the new moon's arms:

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[24] . . . . . un'ombra smorta,
Qual sotto foglie verdi e rami nigri
Sovra suoi freddi rivi l'Alpe porta.
—*Purgatorio* XXXIII 109–111.

[25] E sì come al salir di prima sera
Comincian per lo ciel nuove parvenze,
Sì che la vista pare e non par vera;
—*Paradiso* XIV 70–72.

[26] Quale nei plenilunii sereni
Trivia ride tra le ninfe eterne,
Che dipingono il ciel per tutti i seni,
—*Paradiso* XXIII 25–27.

So her white skin transmutes itself to dark,
When first appears the daughter beautiful
Of him who brings the morn and leaves the night.[27]

Whatever the hour, the stars seem visible to Dante. He times his story to the motion of the heavenly bodies; and each of the three parts of the Commedia ends with the word *stelle*. In Bunyan's allegory of the Man with the Muck-rake he reproves his fellows for their forgetfulness of heaven. So Dante writes in lines that have lost their terror but not their appeal

Heaven calls upon you and about you turns,
Displaying to you its eternal charms,
And yet your eyes are fixed upon the ground;
Whence He chastises you Who all discerns.[28]

For us the stars are purely natural phenomena; as they were not to Dante and doubtless not to Bunyan; but they were also to both, and they remain to us, the never-to-be-forgotten symbol of the moral order and of a world where it comes true.

[27] Così si fa la pelle bianca, nera,
Nel primo aspetto, della bella figlia
Di quei ch'apporta mane e lascia sera.
—*Paradiso* XXVII 136–138.

[28] "Chiamávi il cielo, e intornovi si gira,
Mostrandovi le sue bellezze eterne,
E l'occhio vostro pure a terra mira;
Onde vi batte chi tutto discerne."
—*Purgatorio* XIV 148–151.

THE BALTIMORE NATURALISTS' FIELD CLUB

By R. P. COWLES, Ph.D., 1904

Associate Professor of Zoölogy, Johns Hopkins University

THE Baltimore Naturalists' Field Club had its beginning in 1880 when a group of young scientists, some of them members of the faculty of the University, others students, and a few not connected with the institution, came together and organized a club for the study of Natural History. At the first meeting the following men, of whom a few have become well known, were present: D. C. Gilman, C. Sihler, E. M. Hartwell, W. B. James, F. V. Dosch, H. L. Price, H. W. Stokes, H. N. Martin, E. B. Wilson, W. A. Moale, W. H. Howell, M. A. S. Keyser, A. G. Palmer, M. Warfield, S. F. Clarke, W. T. Sedgwick, K. Mitsukuri, P. B. Wood, H. F. Reid, L. T. Stevens, R. Trimble, and J. Page.

The purpose of the Club as stated by its first president, Professor H. N. Martin, was "the study of the Fauna, Flora, Physical Geography, and Geology of the neighborhood of Baltimore." Frequent excursions were taken during the warmer months, except during the University vacation, and these were usually followed by meetings at which members spoke on subjects of interest to naturalists.

The activity of the Club continued for many years—in fact until a short time before the European war, when meetings and excursions were discontinued. In December, 1919, as a result of the initiative and unceasing interest in nature of Professor E. A. Andrews, the Club was revived with Professor Andrews as president. Since that time under his direction and later under the direction of the writer as president, and Mr. E. Willard Berry, Jr., an undergraduate student, as secretary, many meetings have been held

at which interesting papers were presented, and a number of excursions have been taken which yielded valuable results. While the graduate students of the Zoölogical and Botanical departments have shown a consistent interest in the Field Club, there are indications of increasing interest on the part of undergraduate students, who are now urged to attend the meetings and take part in the excursions.

The following papers were presented at meetings of the Club during 1919–1920 and 1920–1921: Phenomenal Habits of Tropical Crabs, by R. P. Cowles; Lichens around Baltimore: How to Find, Collect, and Preserve (illustrated), by C. C. Plitt; Collection and Study of Tiger Beetles, by W. M. Goldsmith; Scenery and Plants of the Blue Mountains of Jamaica (illustrated), by W. Seifriz; Diatoms: Those Found about the University, by E. W. Berry, Jr.; Illustrated Lecture on Paleontology, by E. W. Berry; Protective Coloration of Flat Fishes, by S. O. Mast; Birds of Baltimore and Migration, by M. L. Raney; Birds, by W. L. McAtee; Peace River Region of Canadian Rockies, by E. M. Spieker; Ferns around Baltimore (illustrated), by C. C. Plitt; Illustrated Lecture on British Honduras, by A. M. Schwitalla; Freshwater Clams of the Mississippi River, by J. F. Mueller; Nesting Habits of the Red Horse, by H. T. Folger.

The following excursions have been taken by the Club during the same period: To "Homeland," to collect from fresh water ponds; to the ant mounds at Timonium; to Gwynns Falls with the Maryland Audubon Society; excursion about Homewood to survey bird houses; excursion to starling roosts at Mt. Royal Ave.; Christmas bird survey of Homewood; to starling roost at Mt. Royal Ave.; to Loch Raven; to U. S. Fish Hatchery at Bryan's Point, Md.

Recently the Club has shown much interest in birds and has been placed in charge of the various activities tending to protect the wild birds which visit Homewood. The grounds are to be known as the Homewood Bird Sanctuary, and work has been or will be undertaken along the following lines: placing of bird-boxes on trees in favorable local-

ities, numbering and recording of boxes, observing and recording the kinds of birds that nest and the time of nesting in the boxes, cleaning the nests in the fall, recording nests made outside of bird-boxes, recording the time of arrival and departure of migratory birds, recording the kinds that remain at Homewood throughout the year, and controlling the enemies of birds. In addition to these activities and in accordance with the suggestion of Mr. W. L. McAtee, a Government expert on birds who made a report on Homewood needs after his lecture here, it is proposed to make plantings of vines, shrubs, and trees which will furnish food and protection for birds, to establish feeding boxes and drinking fountains, and to feed the birds during the winter.

We hope that this work, in which at the present a few are greatly interested, will attract a larger number of people connected with the University and that the Homewood Bird Sanctuary will become an institution which will give pleasure to all.

SESTINA TO PROFESSOR GILDERSLEEVE ON HIS FORTHCOMING SONNETS

By CAROL WIGHT, M.A., 1921

There is a stream whose shadowy current flows
To heal our human shores, and many a star,
That knows no longer the warm throb of life,
Deep sparkling in that wistful water dreams
Of vanished glory, pulsing through the night
Of time its message to make glad our day.

Pale stars whose light survives their darkened day
Gleam from that tremulous water as it flows,
Reflecting splendor from the old world night,
Till on the reddening brow of dawn a star
Rekindling heralds those immortal dreams
That give fresh purpose to man's listless life.

Thine was the priest-like task to kindle life
With fire from that far-off Hellenic day,
When haunted hill and dale were lit with dreams,
When gods, where loved Ilissus softly flows,
Communed with men on earth as star to star
Whispers in Heaven communing through the night.

Yes, faint sweet voices whisper through the night
Of some vague, dim-remembered, loftier life,
When man might hope for kinship with a star,—
A star, whose pure flame dims our gaudiest day,
Whose throbbing splendor, as from Heaven it flows,
Mirrors the consummation of all dreams.

Nor all forgotten are those star-lit dreams
Drifting so darkly down the depths of night,
Till as one soul over another flows,
They touch with beauty the parched lips of life,
Linking the spirit with that Elysian day
Whose light at last shall banish sun and star.

So thou, who hold'st communion with the star
Of vanished Hellas and her deathless dreams,

Dost see with shadowy eyes her dawning day,
Dost hear thin voices singing in the night
That veils the heavens, whence that rich stream of life
Throbbing with star-lit memories earthward flows.

Yes, light that flows from neither sun nor star,
Laves thy dark life with splendor till the dreams,
Born of that night, shine brighter than our day.

COMMENCEMENT

THE Commencement exercises were held in the Lyric Theater on Tuesday afternoon, June 21, 1921, at four o'clock. The music for the occasion was furnished by the Johns Hopkins Orchestra. Rev. Dr. Wyatt Brown, rector of St. Michael and All Angels Protestant Episcopal Church, offered the invocation.

The candidates for the degree of Bachelor of Arts were presented by Dean J. H. Latané; those for the degrees of Bachelor of Engineering, Bachelor of Science in Chemistry, and Master of Electrical Engineering by Professor Gregory; those for the degree of Bachelor of Science by Professor Buchner; those for the degrees of Bachelor of Science in Hygiene, Proficient in Public Health, Doctor of Public Health, and Doctor of Science in Hygiene by Professor Welch; those for the degrees of Master of Arts and Doctor of Philosophy by Professor Miller; and those for the degree of Doctor of Medicine by Dean Williams.

Degrees were conferred as follows: Doctors of Philosophy, 25; Masters of Arts, 21; Master of Electrical Engineering, 1; Doctors of Medicine, 87; Doctors of Public Health, 12; Doctor of Science in Hygiene, 1; Proficients in Public Health, 6; Bachelors of Arts, 72; Bachelors of Engineering, 37; Bachelors of Science, 12; Bachelors of Science in Chemistry, 12; Bachelors of Science in Hygiene, 4.

On behalf of colleagues and friends Professor A. O. Lovejoy presented a portrait of Professor H. S. Jennings to the University.

President Goodnow then read his annual address with announcements.

President Goodnow's Address

Probably few words in the English language have through the process of development attained a meaning so

different from that which was originally attached to them as the word "Commencement." A "Commencement" in academic terminology has come to signify the termination of a course of study at the satisfactory completion of which some sort of a certificate is given. Almost all educational institutions at the present time have "commencements" of this sort. Professional schools, colleges, high schools, elementary schools, evening schools, all now have their "commencement," regardless of the character of the subjects studied, of the courses pursued, or of the certificates granted. And in all these cases a "commencement" formally signifies the successful completion of a course of study.

It is unnecessary, perhaps, to call your attention to the fact that the original meaning of the word "commencement" as applied to an academic function was quite the reverse of its present signification. The word was originally used at the University of Cambridge, England. It denoted the occasion when those who had been studying for a degree received in a ceremonious manner the diploma which was to attest the fact that the coveted degree had been obtained. The significance of the degree consisted in the fact that its holder secured the rights and privileges appertaining to it. The most important of these rights and privileges was the right to enter upon or to commence a career. The word was thus used in its natural ordinary sense to signify the beginning and not the termination of a period. At Cambridge further, as well as later at Harvard which was formed in some ways on the Cambridge model, those persons whom we now call graduates were known as commencers. For they had the right to commence a career, to enter, in most cases, into a learned profession.

The original university was the place where the student fitted himself for a career. Its Latin name *Universitas* was the same name that was applied to the organizations of merchants and craftsmen, known otherwise as guilds. The university organization was in many respects similar to that of these guilds. The university undergraduate

student was the guild apprentice. The Bachelor of Arts was the guild journeyman. The Master or the Doctor in the university took the place of the guild master. Promotion from apprentice to journeyman as from undergraduate to graduate followed the completion of a term of work. Promotion from journeyman to guild master was the result of the production of an approved masterpiece, as it was called, so beautifully portrayed in the Prize Song in Wagner's *Meistersinger von Nürnberg*. Promotion of the Bachelor of Arts to the grade of Master or Doctor in like manner was the consequence of the production of an accepted thesis or dissertation.

In other words, the university was the Guild of Scholars and like the Guild of Merchants or Craftsmen was formed for the purpose of protecting the profession of which students and instructors were all either intending or actual members. The master in the guild supervised the work of the apprentice and the journeyman. The Master or Doctor, i.e., the teacher, directed the studies of the undergraduates and the Bachelors who had chosen to continue their studies.

Later the vocational character of the university, particularly in England, became less marked. Indeed, the English university, which was the mother of the American colleges, became the home of liberal rather than professional studies, and these daughters of the English university followed in the footsteps of their mother. For a long time the commencements of American colleges did not, therefore, as a matter of fact signalize so much the beginning of a career as the completion of a course of study. At the present time, however, the college is becoming more and more a pre-professional school and its degrees like professional degrees are representing more and more, as they originally did, stages in the preparation for a career.

You young men and women who are receiving your degrees today are, therefore, either commencing your chosen careers or, having completed one of the stages in the preparation for such a career, are commencing another stage in

that course of preparation. You are all thus "commencers" in the old Cambridge sense.

The commencement of a career is really more important and significant than the completion of a course of study. The one is almost always associated with hopes and aspirations; the other with regrets and unavailing wishes that circumstances might have been different. We commence a career with confidence. Ignorant of the difficulties which may beset us we look forward with the enthusiasm of the beginner. We close any stage in life with more or less depression. For we realize how much better we might have done—how much more we might have accomplished. The comparison of expectation with accomplishment is to all but a very few a source of discouragement.

It is well, therefore, that we speak of such an occasion as this as a "Commencement." The very word has as its incidents joy and courage. Your faces are turned towards an unknown and limitless future rather than towards a known and circumscribed past. It is the day for the young and enthusiastic rather than for the old and experienced.

None of the experiences and disappointments of us who are gathered on this platform should be permitted to mar the perfection of your confidence or dull the edge of your eagerness. At the same time it may perhaps not be amiss for us to call your attention to one thing. This is, that notwithstanding you possess degrees which certify that you are qualified to commence a career or a stage in the preparation for a career, it is just barely possible that your confidence and your ardor may in a measure surpass the knowledge and capacity which you will require in order to obtain success in the career which you have chosen. For after all you are but commencers.

Recently there has arisen one of those periodical discussions as to the value of a college education. The discussion was in this instance precipitated by a man of eminence in the world of practical affairs. He seems to

assume that such an education has as its necessary effect the accumulation of a miscellaneous lot of information which at any moment should be possible of extemporaneous presentation. If this is his thought, he is unquestionably wrong. The chief purpose of a college education is rather the acquisition of the capacity to do work of a specific character. What is true of a collegiate is almost as true of a professional education. The acquisition of knowledge can come really only as the result of experience. What is learned in any other way seldom has such a reality as to make it an actual part of our lives. If in the courses which you have taken you have learned both how to work and how to work along the special lines which you have chosen, your education may be regarded as completed so far as you can expect to complete it in any institution.

Notwithstanding the education which you have had and of which your degrees are evidence, you are thus merely commencers. Your career has only begun. What you make of the capacity which you have cultivated within the halls of this University is something for which you will in the future be solely responsible. Whatever you may succeed in doing will be to your credit. If in any respect you fail, which we hope will not be the case, you must remember that such failure will be due in large part to the fact that you have been inclined to take the wrong view of this occasion, that you have considered it rather as marking the completion of your education and not merely as the commencement of your career.

Two thousand five hundred years ago Confucius said: "The scholar must have a broad mind and great endurance. His burden is heavy and his service is long. Perfect virtue is the burden which he considers it is his to bear. Is it not heavy? Only with death does his service end. Is it not long?"

What was true then is just as true now. You who are now commencing your career will find that its burden of

virtue and knowledge is a heavy one, and that your service will end only with your lives.

That you may be able to bear the burden you are assuming and that you may through your lives render the service which you are now undertaking is the wish of us who have participated in that period of your preparation which today has come to an end.

THE UNIVERSITY

President F. J. Goodnow spent the summer abroad.

On July 30 Professor Robinson gave a lecture before the Archaeological Club of Boston on "Greek Vases of Toronto;" he spent most of the summer working in the Royal Ontario Museum of Toronto. He also lectured on "Greek Lyric Poetry" with readings at the September meeting of the College Women's Association of the North Shore at Gloucester, Mass.

Professor Robinson published reviews of Poulsen's "Delphi" and O'Connor's "Charm of Kashmir" in the July number of *Art and Archaeology;* in the same number he published an article on "The Discovery of a New Prehistoric Site in Greece at Zygouries." In the *Literary Review* he has recently published a review of Richter's "Catalogue of Engraved Gems of the Classical Style." At the meeting of the Johns Hopkins Philological Association on October 21 he made the presidential address on "Sappho and Her Influence on Later Literature." He also lectured on "Art and Literature" before the Roland Park Country School on October 14.

The American Journal of Philology, vol. xlii, no. 3, edited by Professor C. W. E. Miller, appeared on September 30.

Professor Maurice Bloomfield and Miss Helen Townsend Scott, of Baltimore, Md., were married on July 9. For the first time in a period of service at the University extending over forty years Professor Bloomfield is taking a year's leave of absence which he will spend in Europe. During his absence the department of Sanskrit and Comparative Philology will be conducted by Dr. W. N. Brown.

Dr. Brown had an article in the April–June issue of the *American Journal of Philology,* entitled "Vyāghramāri, the Lady Tiger-Killer: A Study of the Motif of Bluff in

Hindu Fiction;" and an article in the August issue of *Asia*, entitled "Hindu Stories in American Negro Folklore."

Professor H. S. Jennings was one of the vice-presidents of the International Congress of Eugenics which met in New York City, September 22–28, 1921. He presented a paper at the Congress on "Inheritance in Unicellular Organisms."

Professor Jennings, Professor Mast, and S. W. Geiser, Bruce Fellow, spent the summer in researches at the Marine Biological Laboratory at Woods Hole, Mass.

Professor Cowles and two graduate students, Y. Ibara and M. Glassman, continued the biological and hydrographic survey of Chesapeake Bay which was begun in January, 1920. Dr. A. Schwitalla and Professor Cowles began a study of the series of ponds and streams located on the campus at Homewood. The researches deal with the hydrogen ion concentration and carbon dioxide content of the water.

At the Commencement in June a portrait of Professor Jennings was presented to the University by Professor A. O. Lovejoy. Professor Jennings came to Johns Hopkins from the University of Pennsylvania in 1907, and has been director of the Zoological Laboratory since 1910. He is a member of the National Academy of Sciences and of the American Philosophical Society; and a Fellow of the American Academy of Arts and Sciences and of the Royal Microscopical Society of London. He was a pioneer in the fields of animal behavior and genetics, and is an authority in those subjects as well as in the mathematics and philosophy of biology. The portrait was painted by Frank B. A. Linton, of Philadelphia. The artist, who was present at the presentation, considers this portrait of Professor Jennings one of his best. President Goodnow accepted the portrait on behalf of the University: "The University accepts with pleasure and thanks this excellent portrait of one of its most prized members. Dr. Jennings does not need any outward and visible sign to remind us of his work and his

influence as a man in our guild of scholars, in a word, of his inward and spiritual grace. They all love him as a man, revere him as a teacher, and admire him as a scholar. It is, however, a source of great gratification to us to have this portrait which, in addition to portraying him so well, will always be an inspiration to us by reminding us of the important contributions he has made, and is making, to our knowledge of life."

On May 28 a dinner was given at the Hotel Chateau in honor of Professor Jennings to mark the occasion of the twenty-fifth anniversary of his doctorate. Forty-four guests were present, including ex-President Remsen, President Goodnow, Dr. R. M. Yerkes, director of the Information Bureau of the National Research Council, and Dr. C. B. Davenport, director of the Station for Experimental Evolution and of the Eugenics Research Bureau of the Carnegie Institution, Cold Spring Harbor, Long Island. Several of the guests told of their early associations with Professor Jennings and spoke of the special nature of his contributions to science. Dr. Remsen and President Goodnow spoke of his work in the University. Dr. Davenport gave a résumé of his research work, and presented a series of diagrams showing the five special fields in which Professor Jennings has worked and the amount of original work done in each field. At the close of the dinner a morocco bound volume of letters and photographs from over one hundred students and colleagues, scattered throughout the United States and seven foreign countries, was presented to the guest of honor. On the afternoon of the same day a committee representing a large number of Mrs. Jennings' friends presented her with a silver platter as a token of their affection and esteem, and their appreciation of the years of friendship which they have enjoyed with her.

Professor B. E. Livingston and Miss Marguerite Anne MacPhillips Brennan were married on July 2, 1921.

J. G. Edwards, Ph.D., 1921, has been appointed assistant in Zoology.

Mr. Schachne Isaacs has been added to the staff of the department of Psychology as instructor. Mr. Isaacs spent the last year at the Sorbonne, having previously been in psychological research in the Air Service. He will offer courses in Commercial and Industrial Psychology to meet the increasing demand for these applications.

Intelligence tests are now prescribed for all first year men upon entering the collegiate and engineering courses. The results of these tests are to be used in determining the disposition of men whose college work is unsatisfactory, and in other cases where information as to students' general intelligence is needed. Comprehensive research on the correlation of intelligence test grades with college grades and with special abilities is being conducted, intelligence ratings on the last three freshman classes being available from unofficial tests.

Dr. Buford J. Johnson, associate professor of Psychology, spent the summer in Europe.

Professor Frazer spent the greater part of the summer in the laboratory directing the research of a number of students. Dr. Thornton also spent a part of the time in his laboratory.

Dr. E. E. Reid's vacation was devoted to research in one of the laboratories of the Du Pont Company in Wilmington.

Drs. Lovelace and Patrick were engaged with the Davison Chemical Company on research and development work.

The enrollment at the present time in the graduate department of Chemistry is as follows: former graduate students returned, 22; new graduate students, 25. All of these are taking chemistry as their principal subject and practically all are devoting their entire time to graduate work and are or will become candidates for the doctorate. In addition to these there are sixteen fourth-year undergraduates majoring in chemistry who are devoting their entire time to the study of chemistry in the graduate laboratory on Druid Hill Avenue. The present enrollment is thus 63. A few more are expected to report for work a little later, and a

number are taking chemistry as a subordinate subject. It thus appears that the number of graduate students in chemistry this year is considerably greater than ever before in the history of the University.

While the steady increase from year to year in the number of college graduates seeking advanced instruction in chemistry at the University is very gratifying to friends of the University, it brings with it certain serious problems. The present enrollment taxes to about the limit the existing facilities of the laboratory. It is a question whether we can properly handle the number of students we now have without enlargement of the present teaching staff and adding otherwise to the existing teaching equipment. The old question as to the advisability of limiting in some way the number of graduate students has come up this year in a more acute form than ever before.

T. C. Whitner, Jr., Ph.D., 1920, has been appointed instructor in Chemistry.

At the recent meeting of the American Chemical Society in New York and under the chairmanship of Professor Edgar F. Smith, president of the Society, a symposium on the problems of teaching chemistry was attended by an enthusiastic group of teachers and technical men. Lyman C. Newell, Ph.D., 1895, was vice-chairman, and N. E. Gordon, Ph.D., 1917, acted as secretary and was largely responsible for the success of the program. At the conclusion of the final session it was voted unanimously to take the necessary steps to form a regular section of the Society to be known as the Section on Education.

Professor Ames has been appointed by the Franklin Institute of Philadelphia one of the five members of a Board "to carry into effect the intent and purposes of the Henry W. Bartol bequest to the Franklin Institute." This bequest amounts to several million dollars, and the income will be used for the encouragement of investigations in the physical sciences.

Professor Ames delivered a lecture at the Franklin Institute on October 6 on "Aeronautic Research."

Professor R. W. Wood spent the summer in Europe. He attended the meetings of the British Association in Edinburgh and received the degree of LL.D. from the University of Edinburgh. He was also elected a foreign member of the Accademia dei Lincei of Rome.

Dr. Pfund acted during the summer as consulting physicist for the E. I. Du Pont de Nemours Company of Wilmington, Del. He gave a lecture before the Delaware branch of the American Chemical Society at Wilmington on October 17 on "Colorimetry."

F. P. Upton, instructor in Physics, and Miss Elizabeth Cook, of Lanhan, Md., were married on August 31, 1921.

Professor Hulburt and Dr. Musselman attended the summer meeting of the American Mathematical Society which was held early in September at Wellesley College. Dr. Musselman read a paper at the meeting.

Professor Cohen again taught at the summer session of the University of Colorado.

Professors Chinard and Blondheim spent the summer in Europe.

R. C. Williams, '08, Ph.D., 1917, has been appointed associate in Romance Languages.

J. E. Uhler, '13, has been appointed instructor in English.

Dr. George Boas, formerly of the University of California, has been appointed associate in Philosphy.

Professor Lovejoy spent the summer in Europe.

J. H. Swartz, '15, has been appointed instructor in Geology.

Dr. F. D. Murnaghan has been promoted to be associate professor of Applied Mathematics; and Dr. D. E. Weglein to be associate in Education.

Professor G. E. Barnett has been appointed a member of the national and state unemployment conferences.

Professor W. W. Willoughby, who recently returned from a trip to the Far East, has again been granted leave of absence in order to act as technical expert to assist the Chinese Legation in preparation of its case before the disarmament conference in Washington.

The Summer School of 1921 broke all records in attendance, and the registrations in the College Courses for Teachers have already surpassed those of former years. New courses have been offered as follows: Materials and Methods of Teaching General Science in Junior High Schools, by Dr. Ingham; The Organization and Management of Elementary Schools, by Mr. Douglass; Methods and Plans for the Intermediate Grades of the Elementary Schools, by Associate Professor Bamberger; The Principles of Kindergarten-Primary Education, by Miss Berry; and The History of Greece and Rome, by Associate Professor Magoffin.

THE MEDICAL SCHOOL

Dr. Ralph B. Seem left in July, 1920, to become director of the University of Chicago Hospital. Due to the delay in building the hospital the Rockefeller Foundation sent him to Peking for one year to organize the administration of the Union Medical School and Hospital. Associated with him are H. S. Houghton, M.D., 1905, director of the Union Medical School, and J. P. Webster, M.D., 1914, formerly of the Johns Hopkins medical staff and now assistant to Dr. Adrian Taylor, professor of Surgery in the Union Medical School. This step marks an epoch in medicine in China. With the greater facilities provided by the new 250 bed hospital and the medical school the opportunity of training competent physicians and of observing cases has greatly improved.

Dr. Arthur J. Lomas, second assistant director of the Johns Hopkins Hospital for the past two years, left in August to become director of the Hospital of the University of Iowa. He has been succeeded by Dr. Calvin H. Goddard.

Dr. Carl Van Norman has accepted the position of medical superintendent of the Charles T. Miller Hospital in St. Paul, Minnesota. He will leave as soon as his vacancy can be filled.

Dr. Edwards A. Park, formerly associate professor of Pediatrics, left in July to become professor of Pediatrics in Yale Medical School.

Dr. Grover F. Powers left at the same time to become associate professor of Pediatrics in Yale Medical School.

Dr. W. S. Thayer resigned the professorship of Medicine on July first to resume private practice in Baltimore.

Dr. Walter W. Palmer and Dr. Alphonse Dochez, of the medical staff, left during the summer; the former to assume his duties as full time professor of Medicine at Columbia University, the latter to become associate professor of Medicine at the same institution. They have been succeeded by Dr. Alan Chesney who became associate professor of Medicine in August, and Dr. William S. McCann, associate in Medicine, who has been at Cornell University.

George Canby Robinson, '99, M.D., 1903, is professor of Medicine and dean of the Vanderbilt University Medical School at Nashville, Tennessee. While the construction of a new building is progressing, he has been loaned to the Johns Hopkins Medical School for one year to serve as acting head of the department of Medicine. Dr. Robinson has served as resident physician in the Hospital of the Rockefeller Institute, New York, and as associate professor of Medicine and dean in the medical school of Washington University, St. Louis.

E. K. Marshall, M.D., 1917, formerly professor of Pharmacology in Washington University, St. Louis, assumed his duties here on July first as professor of Physiology.

The following promotions have been made: Dr. F. H. Baetjer, to become professor of Roentgenology; Dr. Walter Dandy, to become associate professor of Surgery; Dr. Guy L. Hunner, to become associate professor of Gynecology; and Dr. E. D. Plass, to become associate professor of Obstetrics.

Dr. Maurice C. Pincoffs, formerly associate in Clinical Medicine, has resigned to become professor of Medicine in the University of Maryland.

Dr. J. H. Mason Knox has been granted a year's leave of absence to take charge of the Children's Welfare work in Europe under the Red Cross. During his absence his work will be in charge of Dr. D. C. Wharton Smith, 2d.

Sir Arthur Keith, curator of the Museum and Hunterian Professor to the Royal College of Surgeons, England, gave the thirteenth series of lectures on the Herter Foundation from October fifth to seventh.

Hopkins Scholarships for Maryland, Virginia, and North Carolina for the year 1921–1922 have been awarded to B. W. Leonard of Virginia, and A. W. Jacobsen and A. J. Schaffer of Maryland.

Mrs. Dows and Mr. David Dows of New York have signified their intention of continuing their gift to the University of $17,500 a year for five years from September, 1921, for research in tuberculosis.

Dr. Karl Schlaepfer, assistant to Professor Clairmont in the University of Zürich, was appointed associate in Surgery on October first.

Dr. Ernst Huber, for many years connected with the department of Anatomy in the University of Zürich, has been appointed associate in Anatomy.

In the department of Pharmacology a subdivision of Bio-Physics has been organized. Dr. S. Van der Lingen, senior lecturer in Applied Mathematics in the University of Cape Town, South Africa, has been appointed lecturer.

A drive is on at present to raise $40,000 for the Medical Students Loan Fund. The purpose of this fund is to loan students their tuition ($1000 for the four years) at a moderate rate of interest, thus making it possible for those who need assistance to receive the same without any interference with their work. Loans will be repaid to the fund at the end of four years after graduation. Subscriptions are being received by the treasurer of the University for shares of five dollars each. The coöperation of all alumni and friends is urgently solicited. Send in your subscription now! These contributions are donations and are very much needed.

A signal and unusual tribute was paid to Dr. F. H. Baetjer, now professor of Roentgenology, at a dinner given him by the American Roentgen Ray Society in Washington on September 29.

Dr. Paul W. Clough, associate in Clinical Medicine, has been appointed associate professor of Medicine in the University of Maryland.

Dr. Sydney R. Miller, associate in Clinical Medicine, has also been appointed to the medical staff of the University of Maryland.

Major Howard H. Bailey, of the Army Medical Corps, has been detailed as professor of Military Science and Tactics at the Medical School.

THE SCHOOL OF HYGIENE AND PUBLIC HEALTH

There are eighty-one registered students in the School of Hygiene this year.

Professor R. W. Hegner, of the department of Medical Zoology, has been elected a Fellow of the Royal Society of Tropical Medicine and Hygiene of London, England.

Dr. Welch left in August for China to attend the dedication of the new buildings of the Peking Union Medical College.

A. W. Freeman, M.D., 1905, has been appointed resident lecturer in Public Health Administration succeeding Sir Arthur Newsholme.

Dr. Wade H. Frost, former surgeon in the United States Public Health Service, has been appointed professor of Epidemiology and head of the departments of Epidemiology and Public Health Administration.

Other appointments are: Dr. J. A. Dowell, associate in Epidemiology; Dr. W. W. Randall, associate in Bio-Chemistry; Dr. Margaret B. MacDonnell, associate in Bio-chemistry; J. Ernestine Becker, assistant in Bio-Chemistry; A. Wolman, assistant in Sanitary Engineering; W. A. Hoffman, assistant in Medical Entomology.

THE DEPARTMENT OF ENGINEERING

G. L. Bryan, B.S. in Eng., 1917, has been appointed instructor in Civil Engineering. He will also pursue his studies for the Ph.D. degree in Engineering.

J. T. Thompson, associate in Civil Engineering, spent the summer in Washington with the Bureau of Public Roads, Department of Agriculture, where he was engaged in important research work in connection with the impact of motor trucks on highway surfaces.

Professor J. H. Gregory attended the convention of the American Water Works in Montreal in the late spring.

Professor Gregory and J. W. Smith, chief engineer of the Board of Water Supply, New York City, recently submitted a report to the Improvement Commission of Baltimore on the advisability of deferring the construction of the new pumping station at Lake Montebello. Professor Gregory has also been serving as consulting expert to City Solicitor Marchant in connection with the valuation of the properties of various water companies which are being purchased by the City of Baltimore and incorporated under the water works system of the city.

F. W. Kouwenhoven, instructor in Mechanical Engineering, and Miss Alice H. Witherell, of Brooklyn, N. Y., were married on September 6, 1921.

Professor J. B. Whitehead attended the convention of the American Institute of Electrical Engineers at Salt Lake City in June and, in conjunction with Dr. F. W. Lee, presented a paper on "The Electric Strength of Air."

Professor Whitehead will present a paper on "The Corona Voltmeter" at the midwinter convention of the A. I. E. E. in New York City. This paper will soon be published.

Dr. W. B. Kouwenhoven attended the convention of the American Society for Testing Materials at Asbury Park, N. J., in August, where he presided over a committee on magnetic analysis. Dr. Kouwenhoven has been engaged in research work for this committee all summer and has been making magnetic tests on drills.

A military committee, composed of Professor Gregory, Dr. Kouwenhoven, and Dr. Abercrombie, has just decided on a new uniform for the R. O. T. C. cadets. These uniforms will be made by a Baltimore tailor and will be of whipcord, with English style blouse and long trousers, leather belts, khaki shirts, and black ties. This style of uniform is far superior to the old enlisted man's uniform and will be worth about twenty-five dollars. The uniforms will be supplied by the United States Government.

W. A. Dehuff, formerly associate professor of Civil Engineering, has been appointed principal of the Baltimore Polytechnic Institute.

H. W. Waterfall has been promoted to be associate professor of Mechanical Engineering.

There has been for some time a regular annual exchange of professors between individual universities in France and America in regular academic fields, but there has never been, as yet, any such exchange in engineering or applied science. Furthermore, the French methods of teaching these subjects are unlike our American methods for various reasons, based on the history, traditions, and sociology of the two countries. The great war showed the importance of engineering in production and distribution, and the many ties of friendship which bind us to France depend in various ways upon applied science. It should therefore be to the mutual advantage of France and America to become better acquainted with each other's ideals and viewpoints in the study and in the teaching of these great groups of subjects.

With these purposes in mind, the late Dr. R. C. MacLaurin, as president of the Massachusetts Institute of Technology, consulted in 1919 the presidents of six universities on or near the Atlantic seaboard, as to whether they deemed it desirable to coöperate in such a joint exchange of professors with France on a plan definitely outlined. As their replies were very favorable to the project

a committee was appointed, with one member from each of the seven institutions, to report on the plan and on methods of carrying it into effect. The committee met in December, 1919, and ratified the coöperative plan with some few modifications. The present president of the committee is Director Russell H. Chittenden of Yale, and its secretary Dean John Frazer of the University of Pennsylvania.

Since the Institute of International Education in New York concerns itself with the interchange of college students and teachers from all parts of the world, the committee requested the director of the Institute, Dr. Stephen P. Duggan, to undertake the negotiations between the committee and the French University Administration. The French have selected as their first representative Professor J. Cavalier, rector of the University of Toulouse, and a well-known authority on metallurgical chemistry, who will come to America this fall and divide his time during the academic year among the seven coöperating institutions, namely Columbia, Cornell, Harvard, Johns Hopkins, Massachusetts Institute of Technology, Pennsylvania, and Yale.

The American universities have selected as their representative for the first year Dr. A. E. Kennelly, professor of Electrical Engineering at Harvard University and the Massachusetts Institute of Technology.

UNDERGRADUATE ACTIVITIES

By WILLIAM H. MOORE, JR., '23

The opening of the forty-fifth year of instruction at the University was marked by an exceedingly large enrollment, far in excess of that of previous years. The undergraduate figures, however, are only slightly above those of last year, approximately 700 students having registered. Exactly 304 students were enrolled in the engineering and 368 in the academic department, 17 men enrolling as special students.

The freshman class this year has been unanimously declared one of the best-spirited ever to enter the University. As students, they are, of course, as yet an unknown quantity, but as for spirit, from all indications they have the variety that will serve to keep Hopkins in its place of prominence with other universities.

The class, led by R. Page O'Connor, who was unanimously elected president, has entered into everything with all the vim and eagerness that could be desired. According to a new ruling by the Student Council, all freshmen are required "within two weeks after the beginning of the college year to be actively participating in some recognized student activity or must present to the Student Council some logical excuse for not doing so." The rule would probably not have been necessary, for the members of the class have, for the most part, lost no time in selecting some activity.

The attitude of the incoming class has served greatly to brighten the already brilliant prospects of the University. All existing circumstances point to a successful future for our Alma Mater.

Athletics as a whole present a pleasing outlook. Football, always a drawing card, has made an enviable record thus far this year. A most attractive schedule of nine games was prepared for the season. The first three games were played

on our home grounds and the invaders were vanquished in turn.

Mt. St. Mary's who first clashed with the Black and Blue, found their hosts to be a rather light lot and rather green to college football. They could not, however, pack the necessary punch to defeat the "greenies" and were obliged to return to Emmitsburg on the short end of a 3–2 score. Delaware, who visited us the following week was met by an entirely different looking set of gridders and was inhospitably cuffed to the tune of 27-0. Dickinson, on the Saturday following, helped treat the fans to as exciting a game of football as has ever been seen on Homewood field. Hopkins emerged the victor at the rate of 6-0, but was forced to battle from whistle to whistle.

The team is composed principally of prep-school talent, but has played a tight, fighting, machine-like game that has drawn the admiration of all of the rooters for the Black and Blue. The remaining games on the schedule are: Oct. 29, Western Maryland College; Nov. 5, Haverford College; Nov. 12, Swarthmore College (away); Nov. 19, St. John's College, and Thanksgiving Day, Washington and Lee University.

The track season has but just started, but a survey of the candidates should offer encouragement to the most pessimistic. Coach Le Cato, who formerly trained Delaware College speed-men, has been obtained to manage this sport, and has had a number of promising men report for his training. A most successful season is predicted.

Cross-country began its first season at Hopkins this year as a minor sport. The runners have been working out daily and an enticing schedule has been promised.

Fall lacrosse practice started last week and a larger number of candidates than ever before reported. Perfection in stickwork will be the sole object of the practices until December when the fundamentals of the game will be taught. Scrimmages will not begin until January. The first game, that with the Alumni, is scheduled for the early part of

April. Practically the whole of last year's team has returned and has been recruited by a dozen or more prep stars. John Knipp will again handle the squad.

The baseball team probably offers the nearest complete line-up of all the sports. With the exception of a catcher, the 1921 season's line-up remains intact for 1922 service. An attempt will be made, this year, to schedule a game for every other day during the season.

None of the minor sports has lost enough men to weaken it. Basketball, which has suffered worst, may be dropped from Hopkins' list of athletic activities. The student-body, however, is very desirous of having this sport continued. It is, of course, realized that at present it is a drain upon the athletic treasury, but it is believed that after it has taken its place in our athletic life, it will receive better support.

The non-athletic activities at the University received a great boost, when, last year, a non-athletic fee of ten dollars per man was levied by the unanimous vote of the student body. The fee has put a fund of $4,000 at the disposal of these activities. Under this system, the *Hullabaloo*, *News Letter*, Musical Clubs, Dramatic Club, *Black and Blue Jay*, Debating Council and Y. M. C. A. are assured of financial support. The fee entitles the student to a year's subscription to the *Hullabaloo*, *News Letter*, *Black and Blue Jay;* a membership in the Y. M. C. A., and tickets to the concerts, debates, and plays of the respective clubs.

One of the greatest improvements of the year has been the publication of the *News Letter* as a semi-weekly sheet. The size of the sheet has been enlarged and the number of pages reduced from eight to four. The paper contains more current news than previously and has met with the enthusiastic approval of the student-body.

The first issue of the *Black and Blue Jay* is about to go to press. From the appearance of the copy submitted, the first issue should prove a great success. The stories are snappy, the drawings clever, and the general appearance very great. The magazine has taken its place as a fixture in Hopkins student-life.

The *Daily Bulletin*, which was published last year, has been discontinued. Five movable letter bulletin boards have been installed to replace it and have served their purpose well.

The Dramatic and Musical Clubs have started their work for the season and expect to make their appearances in a short while.

Another Hopkins institution, the Reserve Officers Training corps, began the year with a fine record behind it and a fine outlook before it. The unit of last year received honorable mention by the commanding officer of the district. He declared it to be a model unit and one that stood among the highest of college units.

Two big changes are to take place, this year, in this organization. The government has given the treasury of the institution a sum of money from which special, tailored uniforms may be purchased for the men. The uniforms are cadet-gray in color and tailored along very snappy lines. This innovation has been welcomed by the members of the corps.

The second big change is the installation of an engineering unit at the University. The proposition has been under consideration for some time and has finally been adopted. From its present appearance it will not be at all surprising to have the Hopkins unit chosen for 1922 honors.

With all prospects so bright, all that is needed to make Hopkins a model university in every way is the erection of the long awaited dormitories. These should give the University the one bit of college atmosphere which has been so lacking.

As a whole, Hopkins activities seem to be gaining in strength and offer a future of which their founders among the alumni may be justly proud.

THE JOHNS HOPKINS ALUMNI ASSOCIATION

A Directory of the Officers of the General Association and the Branches

The officers of the general Alumni Association are:

George W. Knapp, Jr., '99, president, 1901 Light St., Baltimore.

Horace E. Flack, Ph.D. 1906, treasurer, City Hall, Baltimore.

Robert B. Roulston, '00, Ph.D., 1906, secretary, Johns Hopkins University.

The officers of the Branch Associations are as follows:

New England—Dr. Harvey Cushing, president, Boston, Mass.; Stephen Rushmore, M.D., 1902, secretary-treasurer, 522 Commonwealth Ave., Boston, Mass.

Georgia Alumni Association—M. L. Boyd, M.D., 1907, president, Atlanta, Ga.; J. A. Addison, '03, secretary-treasurer, Y. M. C. A., Atlanta, Ga.

Virginia Alumni Association—D. S. Freeman, Ph.D., 1908, president, Richmond, Va.; R. E. Loving, Ph.D., 1905, secretary-treasurer, Richmond University, Richmond, Va.

Northern Ohio Alumni Association—C. W. Stone, M.D., 1905, president; J. S. Moore, '00, treasurer; W. G. Leutner, Ph.D., 1905, secretary, Adelbert College, Cleveland, Ohio.

New York and New Jersey Association—Col. Ned Arden Flood, '90, president, 67 Exchange Place, New York City; N. B. Foster, M.D., 1902, vice-president, 850 Park Ave., New York City; W. H. Brown, M.D., 1907, secretary, Rockefeller Hospital, New York City; Edwin S. Lewis, Ph.D., 1892, treasurer, 258 Broadway, New York City.

Northwestern Alumni Association—James Alton James, Ph.D., 1893, president, Northwestern University; William L. Ross, '99, secretary, 105 S. La Salle St., Chicago, Ill.

West Virginia Association—J. E. Hodgson, Ph.D., 1909, president, West Virginia University, Morgantown, W. Va.; Charles B. Cannaday, secretary, West Virginia University, Morgantown, W. Va.

Southern California Association—W. V. Brem, Jr., M.D., 1904, president; N. H. Williams, M. D., 1913, secretary, Los Angeles.

St. Louis Association—G. O. James, '95, Ph. D., 1899, president; B. Brooks, M.D., 1911, secretary and treasurer, Washington University Medical School, St. Louis, Mo.

Central California Association—J. M. Wolfsohn, M.D., 1911, president; S. H. Hurwitz, M.D., 1912, secretary and treasurer, University of California, San Francisco, Calif.

Minnesota Association—H. W. Cook, '98, M.D., 1902, president; E. H. Sirich, '06, Ph.D., 1914, vice-president; H. B. Dornblaser, M.D., 1914, secretary and treasurer, Minneapolis.

Washington, D. C., Association—W. T. Thom, Ph.D., 1899, president; W. L. DeVries, '88, Ph.D., 1892, vice-president; J. L. Bost, former student, secretary-treasurer.

MEETINGS OF THE EXECUTIVE COMMITTEE

The regular meeting of the executive committee of the Alumni Association was held on Tuesday, June 7, 1921, at 4.30 p.m., in Room 615, Fidelity Building. Those present were Messrs. Barnett, Flack, Griswold, Knapp, Mullen, Niles, Roulston, Schmeisser, and Wroth; absent, Messrs. Baetjer, French, Singewald, and Whitehead.

The minutes of the last meeting were read and approved.

The treasurer made his usual monthly report.

For the Scholarship Committee Mr. Niles reported that he had not been able to have a consultation with Dean Latané and Dean Whitehead. Dean Latané had, however, expressed the opinion that the University should have either complete control or none at all over the awarding of the scholarships. It was the opinion of the committee that Mr. Niles should make another attempt at a consultation and report to the committee at a later meeting.

The secretary gave a short account of the meeting of the Association of Alumni Secretaries which he attended as the representative of the committee. The meeting was held at Cornell University in May.

The president announced that the Board of Editors of the ALUMNI MAGAZINE had appointed Dr. R. B. Roulston managing editor for the year 1921–1922.

The committee then adjourned until Tuesday, October 4, 1921.

The regular meeting of the executive committee of the Alumni Association was held on Tuesday, October 4, 1921, at 4.30 p.m., in Room 615, Fidelity Building. Those present were Messrs. Flack, Griswold, Knapp, Roulston, Schmeisser, and Singewald; absent, Messrs. Baetjer, Barnett, French, Mullen, Niles, Whitehead, and Wroth.

The minutes of the last meeting were read and approved.

The treasurer made his usual monthly report.

The secretary reported that it would be impossible to give a roster of alumni organizations in the November number of the ALUMNI MAGAZINE as the Alumni Council is be heard from.

In the absence of Mr. Niles the following report of the Scholarship Committee was submitted by Mr. Griswold:

The alumni of the Johns Hopkins University, acting through their organizations, the Alumni Association, the Johns Hopkins Varsity Club, and the Homewood Company, have formulated a plan to institute certain scholarships at the University to be known as Hopkins Alumni Scholarships.

1. Believing that the object of collegiate education is not merely mental training, but also the development of those mental, moral, and physical qualities which combine to develop men of personality and power: and believing that the best interest of the University will be served by having among its undergraduates and alumni an increasing number of such men, they propose that election to such scholarships shall be made upon a basis similar to that of the Rhodes Scholarships, these scholarships to be open to men who have passed the University entrance requirements and to be awarded upon the following basis:

(a) Literary and scholastic ability and attainments as shown by their school records and entrance examinations.

(b) Qualities of manhood, force of character, and leadership.

(c) Physical qualifications as evidenced by participation in outdoor sports or in other ways.

2. The amount of each scholarship shall be limited to the annual tuition fee (exclusive of laboratory and other fees), except that the Committee of Selection may in their discretion, in the case of a student entering the University who is not a resident of Baltimore City or County, allow an additional sum not exceeding two hundred and fifty dollars ($250.00) to help defray expenses of living and maintenance.

3. The Committee of Selection, which shall award the Alumni Scholarships, shall consist of the president of the Alumni Association, who shall be chairman, the president of the Homewood Company, and the chairman of the Alumni Council. The Committee may elect a secretary who need not be a member of the Committee.

The selections of the foregoing Committee shall be submitted for final approval to the Dean of the Collegiate Department and the Dean of the Engineering Department.

4. Each scholarship shall continue for a period of one year, and scholars shall be eligible for re-election at the expiration of the period for which they were elected, but no scholar shall be chosen for an aggregate period greater than four years.

5. It is proposed to raise the principal sum of fifty thousand dollars ($50,000) which will produce an annual income of approximately twenty-five hundred dollars ($2500), which income may be apportioned among resident and non-resident scholars at the discretion of the Committee of Selection.

6. Until such time as said principal sum has been raised, the Committee shall have power in its discretion to draw upon the principal of the fund an amount not exceeding twenty-five hundred dollars ($2500) in any one year in order to provide for the scholarships.

7. Candidates for the scholarships shall make application to the chairman or secretary of the Committee of Selection, submitting at the time of their application the following papers:

(a) A statement from the principal of the candidate's school endorsing his candidacy and setting forth his qualifications.

(b) A certified record from his school of the courses pursued by him, together with the grades received.

(c) A certificate from the Johns Hopkins University that the entrance requirements have been fulfilled.

(d) A statement by the candidate of his general activities in school and his proposed activities and interests in college.

(e) Letters of recommendation from not less than four nor more than eight persons regarding the qualifications of the candidate.

Every candidate for the scholarships must appear in person before the Committee of Selction unless there are extraordinary reasons preventing such appearance.

The report was adopted by the committee as presented, and the original Scholarship Committee was declared dismissed. President Knapp reported the appointment of a new Alumni Scholarship Committee of which Mr. Wallis Giffen is chairman. This action was endorsed by the committee. The committee also authorized the payment of the clerical expenses of said committee by the Alumni Association.

On motion by the secretary E. G. Sihler, Ph.D., 1878, was elected an honorary life member of the Association.

The committee then adjourned to meet on Tuesday, November 1, 1921.

ALUMNI NOTES

H. Chambliss, Ph.D., 1900, late commanding officer of the United States nitrate plant at Sheffield, Ala., has been appointed to take charge of the department of Chemistry at the Catholic University. Dr. Chambliss succeeds Rev. J. J. Griffin, Ph.D., 1895.

Rev. C. G. Kelly, '08, Ph.D., 1916, who has spent the past two years as a missionary in Tunis, North Africa, was in Baltimore for a short visit during the summer.

Rev. C. H. Ranck, former student, is now stationed in Harrisburg, Pa.

Rev. R. W. Smith, '15, is pastor of St. Matthew's Church, Hallowell, Me. Mr. Smith was ordained deacon of the Protestant Episcopal Church in June.

V. E. Smith, '98, is general manager of the Kew Gardens Real Estate Company, Kew Gardens, Long Island.

Rev. T. S. Will, '10, is rector of the Episcopal church at Kingsville, Md.

C. A. Bryan, '18, has been named "honor man." of the Hopkins unit of the Reserve Officers' Training Corps and has been recommended to the War Department for a commission as second lieutenant. Mr. Bryan has been doing graduate work in Political Economy and Political Science. L. W. Call, Jr., B.E., 1921, and C. F. Chisholm, B.E., 1921, also applied for commissions. Mr. Call and K. R. Mullikin, B.E., 1921, passed the examinations for their commissions on April 25.

H. P. Houghton, Ph.D., 1907, executive secretary of Wisconsin Colleges Associated, was ordained to the diaconate of the Protestant Episcopal Church on June 12 at St. Paul's Church, Milwaukee, by the bishop of the diocese. In addition to his work in connection with college organization, Dr. Houghton will be assistant at St. Paul's during the coming winter. *The Living Church* for August 20 contained an article by Dr. Houghton entitled "The Church Adaptive."

J. E. Pessel, May Fellow in Medical Research, 1920–1921, has been appointed chief of the laboratory service at Fort McHenry Hospital, Baltimore.

The engagement of Eleanor Diggs, M.A., 1918, to H. E. Corner, '14, has been announced.

G. Goetz, '21, recently delivered an address on "Sidney L. Nyburg, the Man and His Works" before the Maryland Academy of Sciences. Mr. Goetz has been chosen head of of the literary section of the Academy.

J. C. Potter, M.D., 1921, has

gone to Guatemala, Central America, where he will take up medical work.

H. E. Niles, '20, has gone to Europe to take up special work in statistics.

M. C. Pincoffs, Jr., M.D., 1912, has been appointed professor of Medicine and head of the department of Medicine in the Medical School of the University of Maryland.

G. W. Brown, Ph.D., 1910, for the past four years professor of Hebrew and Old Testament Literature in the College of the Bible, Lexington, Ky., has accepted the chair of Indology in the College of Missions, Indianapolis, Ind.

Anabel E. Hartman, M.A., 1918, has resigned as instructor in English at the University of Illinois and will continue her studies at the University. She will also be instructor in English at Notre Dame College.

W. K. Woolery, former student, has been appointed professor of History in Bethany College, West Virginia.

S. R. Gammon, Jr., Ph.D., 1921, has been appointed professor of History in Austin College, Logan, Texas.

Meta H. Miller, M.A., 1919, has resigned her position as instructor in Romance Languages at Wells College, Aurora, N.Y., and will continue her studies at the University.

Rev. R. E. Miller, '11, chaplain in the U. S. Navy, has been assigned to the Naval Academy, Annapolis, Md., for duty as junior chaplain.

H. L. Russell, '09, is connected with the U. S. Forestry Service at Bristol, Tenn.

G. W. Norris, '18, has been appointed instructor in Mathematics in the Baltimore City College.

Ethel M. Staley, former student, has been appointed instructor in French at the Western High School, Baltimore, Maryland.

H. M. Johnson, Ph.D., 1912, is spending the academic year at the University of Minnesota, substituting for Professor Woodrow.

H. E. Bloomsburg, B.S. in Chemistry, 1920, has been appointed to a scholarship in the School of Mines, Engineering, and Chemistry of Columbia University.

J. H. Cloud, M.A., 1918, has been appointed professor of Physics in the Oklahoma Agricultural and Mechanical College, Stillwater, Okla.

W. H. Wood, former student and all-round Hopkins athlete, has entered the U. S. Military Academy at West Point.

A. M. Schwitalla, Ph.D., 1921, has received an appointment at St. Louis University, St. Louis, Mo., as associate professor of Biology.

L. F. Hildebrandt, '02, is instructor in Spanish at the U. S. Naval Academy, Annapolis, Md.

Judge M. A. Soper, '93, received the degree of doctor of laws from St. John's College, Annapolis, Md., at the Commencement exercises in June.

J. L. Campion, Ph.D., 1917, was instructor in German in the Summer School of the University of Pennsylvania during the past summer.

"Equal Suffrage in the Senate, the Only Irrepealable Part of the Constitution—Can the 19th Amendment Repeal the Irrepealable?" by G. S. Brown, '93, appeared in *The Daily Record* for June 13, 1921.

M. DeGrange, '00, is teaching in Hood College, Frederick, Md.

K. S. Toms, former student, is with the Ox Fibre Brush Company of Frederick, Md.

Nellie F. Pelton, M.A., 1918, is instructor in Freshman English and Public Speaking at Concordia College, Moorehead, Minn.

Edna M. Biddison, former student, is instructor in English at Salem Academy and College, Winston-Salem, N. C.

Rev. A. K. Barton, '14, has returned from Oxford and is working in missions of the Protestant Episcopal Church in the Far West.

Major J. A. Crane, '07, of the United States Army, is stationed at Fort Leavenworth, Kansas.

J. H. Shrader, Ph.D., 1913, has been appointed director of the Bureau of Food and Chemistry, City Health Department, Baltimore, Md.

G. E. Schiavo, '19, was recently with the Banco di Roma in New York City, has returned to pursue work in Economics at the University for the Ph.D. degree during the present year.

The engagement of Miss Louise De Lancey Barclay, of Baltimore, Md., to A. F. Voshell, '15, M.D., 1919, has been announced.

S. H. Lauchheimer, '90, has been elected president of the Maryland State Bar Association: A. W. Machen, Jr., '96, vice-president: J. W. Chapman, Jr., Ph.D., 1896, secretary; and A. A. Doub, '86, a member of the executive council.

The engagement of Miss Francis Kinghorn, of Providence, R. I., to A. K. Chalmers, '18, has been announced.

C. J. Weber, '14, has been appointed instructor in English at the U. S. Naval Academy, Annapolis, Md.

L. McMaster, Ph.D., 1906, professor of Chemistry and head of the department of Chemistry and Chemical Engineering in Washington University, St. Louis, Mo., has recently published in the *Journal of the American Chemical Society* a paper on "The Solubility of Phthalic Acid in Water and Sodium Sulfate Solutions."

B. Rosen, former student, is director of the educational group of the Federation of Jewish Charities of Philadelphia.

E. W. Esslinger, M.A., 1912, is with the United Hydro-Carbons Company of Charleston, W. Va.

H. W. Steele, former student, is extension secretary of the Texas Children's Home and Aid Society, with offices at Fort Worth, Texas.

E. Crispin, M.D., 1906, has announced the removal of his offices to Suite 1031 Pacific Mutual Building, Los Angeles, Calif., where he will continue the practice of general diagnosis and internal medicine.

H. W. Ewald, B.S. in Eng., 1918, at last reports is happily married and is engaged in engineering work on automatic substations for the General Electric Company of Schenectady, N. Y.

M. L. Hancock, B.E., 1919, is working for the Durham Public Service Company at Durham, N. C.

L. S. Kauffman, B.E., 1920, is located in Denton, Md.

E. E. Gorsline, Ph.D., 1908, is a member of the firm of Scrantom, Wetmore and Company of Rochester, N. Y.

A. M. Soho, Ph.D., 1898, is said to be teaching Modern Greek at Columbia University.

E. F. Ducasse, M.D., 1914, recently obtained the degree of M.D. from the University of Paris and is now practicing medicine in that city.

Rev. J. L. Jackson, '05, is pastor of a church in Charlotte, N. C.

Rev. R. E. Ziegler, '05, is at present located in Chicago, Ill.

W. B. Duerr, '17, who spent the past year in Japan, visited the University during the summer.

E. H. Sehrt, '11, Ph.D., 1915, Johnston Scholar, is spending part of the present academic year in Germany.

H. F. Frank, '17, is teaching Mathematics at the Baltimore Polytechnic Institute.

Lucy G. Branham, M.A., 1914, was a passenger on the first train bearing American relief administration workers to the famine stricken districts of Russia.

W. W. Almy, '21, has been appointed instructor in the Baltimore City College.

S. C. Harry, '94, has been appointed professor of Mathematics in the Baltimore City College.

R. G. Heiner, '21, has gone to Oxford University, England, to take up his work as Rhodes Scholar from Georgia.

J. E. Rowe, Ph.D., 1910, has been appointed head of the department of Mathematics at William and Mary College, Williamsburg, Va.

The engagement of Miss Susan Rush, of Norfolk, Va., to M. H. Coblentz, '12, has been announced.

A. F. Voshell, '15, M.D., 1919, has been appointed to the department of Orthopedic Surgery at the medical school of the University of Virginia.

J. B. Arthur, B.E., 1920, is captain in the ordnance department of the United States Army.

Esther J. Crooks, M.A., 1921, has been appointed instructor in Spanish in Goucher College, Baltimore.

Rev. J. P. Coony, Ph.D., 1903, has left St. Louis University and is a member of the faculty

of Campion College, Prairie du Chien, Wis.

J. M. Mathews, '06, Ph.D., 1909, has joined the faculty of the University of Nebraska as professor of Political Science.

W. S. Rusk, former student, has been appointed head of the department of Art and Archaeology at Wells College, Aurora, N. Y.

I. I. Efros, former student, is at the Baltimore Hebrew College.

P. P. Claxton, former student, is provost of the University of Alabama.

R. H. Griffith, former student, is professor of English at the University of Texas.

A. P. Winston, former student, is associate professor of Business Administration at the University of Texas.

E. J. Villavaso, former student, is professor of Romance Languages at the University of Texas.

A. H. Fisher, '09, is assistant attorney-general of Maryland.

An account of the life and work of C. S. Palmer, Ph.D., 1896, recently appeared in the Pittsburg *Sun* under the caption "Who's Who in Pittsburgh."

C. E. Bills, B.S., 1920, has been appointed lecturer in Physiological Chemistry in Alberta University, Edmonton, Alberta, Canada.

The engagement of Miss Helen Marie Vincent, of Newark, N. J., to P. W. Sutton, '17, M.D., 1921, has been announced.

E. E. Perkins, Jr., B.S. in Eng., 1917, has been appointed assistant in Electrical Engineering at the University of Illinois.

M. A. Soper, '93, has resigned as chief judge of the Supreme Bench of Baltimore.

A. M. Withers, M.A., 1916, has gone to the University of Tennessee at Knoxville.

H. F. Holtzclaw, Ph.D., 1917, is dean and professor of Commerce and Marketing at Oklahoma Agricultural and Mechanical College, Stillwater, Okla.

A. W. McDougall, '91, has gone into business in Yonkers, N.Y., after twenty-five years spent in social work and as charity executive.

The engagement of Miss Virginia Lee Milton, of Wilmington, N. C., to J. M. T. Finney, Jr., M.D., 1919, has been announced.

F. O. W. Reinhard, M.D., 1914, has gone to Czecho-Slovakia to take up child welfare work with the American Red Cross. He will work under Dr. J. H. Mason Knox.

K. Simpson, '14, Ph.D., 1917, is teaching in the School of Commerce of the University of Maryland.

J. D. Prince, Ph.D., 1892, has been appointed American Minister to Denmark.

O. B. Helfrich, '16, Ph.D., 1920, was transferred during the summer from Arlington, N. J., to the Experimental Station of the Du Pont Company at Wilmington, Del, He later resigned from the Du Pont Company to enter consulting work.

The engagement of Miss Cushing Whitridge Williams, of Baltimore, Md., to E. W. Bridgman, '08, M.D., 1912, has been announced.

J. W. Churchman, M.D., 1902, has been awarded the Alvarenza Prize of the College of Physicians of Philadelphia for his experimental studies of the "Selective Bacteriostatic Action of Gentian Violet." Dr. Churchman was recently elected a member of the Harvey Society of New York.

The engagement of Miss Janette LaMont, of Rochester, N. Y., to R. K. Taylor, '20, has been announced.

Elizabeth Persons, M.A., 1921, took a party abroad during the summer, touring Italy, France, Belgium, and England.

R. M. Atwater, D.P.H., 1921, has been appointed to the medical staff of the Hunan-Yale Medical School, Changsha, China.

C. Gaines, M.D., 1920, is chief resident physician at Garfield Memorial Hospital, Washington, D. C.

T. J. Tingley, '16, has become a member of the law firm of Smith and Smith of Baltimore, Md.

C. H. Miegel, '18, E. S. Basford, '21, L. M. Latané, graduate student, and Claire M. M. Strube, Ph.D., 1919, are teaching at Mt. Vernon College of Baltimore, Md. Mr. Miegel is also studying law at the University of Maryland and has been elected president of the senior class. R. C. Thomsen, '19, has been chosen historian.

R. R. Duncan, '18, has been awarded the scholarship of the third year class of the Harvard Law School.

W. H. Bahlke, Ph.D., 1921, is employed as research chemist with the New Jersey Zinc Company at Palmerton, Pa.

D. C. Jones, Ph.D., 1921, is the holder for 1921–1922 of one of the national research fellowships. He is working with Professor Donnan in University College, London.

I. N. Kugelmass, Ph.D., 1921, holds a Belgian research fellowship and is working in Brussels.

J. F. King, Ph.D., 1921, has been appointed assistant professor of Chemistry in Williams College.

F. K. Bell, '16, Ph.D., 1920, is an assistant in the department of Pharmacology of the Medical School, and is engaged principally in chemical research.

B. S. Neuhausen, '18, Ph.D., 1921, is an assistant in Physiology at the Medical School, where he will devote himself principally to research.

G. J. Laing, Ph.D., 1896, has left Chicago University to become dean and head of the department of Classics at McGill University, Montreal, Canada.

E. O. Hulburt, '11, Ph.D., 1915, has been appointed assistant professor of Physics at Iowa State University.

P. H. Edwards, Ph.D., 1910, has been appointed assistant professor of Physics at the

University of Texas, Austin, Texas.

W. P. Angel, M.A., 1919, has been appointed assistant professor of Physics at Tulane University, New Orleans, La. Mr. Angel spent part of the summer at Langley Field as an aid in the aeronautic laboratory for the National Advisory Committee for Aeronautics.

Helen Barton, former student, has been appointed Dean of Women at Albion College, Michigan.

J. S. Van der Lingen, Ph.D., 1921, is a lecturer in Bio-Physics at the Medical School.

R. A. Castleman, Ph.D., 1921, is an assistant physicist at the Bureau of Standards, Washington, D. C.

M. S. Van Dusen, Ph.D., 1921, is an associate physicist at the Bureau of Standards, Washington, D. C.

G. Breit, '18, Ph.D., 1921, has a national research fellowship and is at the University of Leyden, Holland.

Teresa Cohen, Ph.D., 1918, has been promoted to be associate in Mathematics at Pennsylvania State College.

E. R. Taylor, B.E., 1921, is with the American Telephone and Telegraph Company of New York City.

Europe, 1789–1920, by E. R. Turner, Ph.D., 1910, has rerecently been published by Doubleday, Page and Company.

H. P. Straus, '02, Ph.D., 1905, is working in the Mexican oil fields with headquarters in Vera Cruz.

MARRIAGES

E. H. Adams, M.D., 1919, and Miss Meta F. Whittemore, of Baltimore, Md., on June 13, 1921.

W. F. Albright, Ph.D., 1916, and Ruth Norton, Ph.D., 1921, on August 31, 1921.

W. H. Bahlke, Ph.D., 1921, and Miss Agnes Louise Wilbon, of Baltimore, Md., on October 18, 1921.

A. A. Bailey, M.D., 1921, and Miss Eva Hardy Ginn, of Winchester, Va. on June 27, 1921.

A. K. Barton, '14, and Miss Margaret Ankarcrona Lundbye, of Goteborg, Sweden, on July 21, 1921.

S. Bayne-Jones, M.D., 1914, and Miss Nannie Moore Smith, of Specutia Island, on June 25, 1921.

Araminta Brinsfield, B.S. 1921, and Mr. George E. Rullman, of Annapolis, Md., on June 22, 1921.

J. S. Briscoe, '01, and Miss Marie Mehring Lambert, of Baltimore, Md., on June 22, 1921.

W. N. Brown, '12, Ph.D., 1916, and Miss Helen Harrison, of Baltimore, Md., on June 29, 1921.

G. L. Carrington, M.D., 1920, and Miss Maud Easter Black, of Baltimore, Md., on June 17, 1921.

T. L. Chisholm, B.E., 1919,

and Miss Miriam Reese Uhler, of Baltimore, Md., on June 11, 1921.

P. C. Craft, '20, and Miss Virginia Lee Griffith, of Baltimore, Md., on October 7, 1921.

J. S. Dempster, former student, and Miss Estelle E. Dunbracco, of Baltimore, Md., on June 18, 1921.

R. J. Erickson, M.D., 1916, and Miss Dorothy Dohme, of Baltimore, Md., on September 17, 1921.

F. A. Evans, M.D., 1914, and Miss Sara Elizabeth Fischer, of Baltimore, Md., on September 7, 1921.

H. C. Evans, '18, and Miss Eleanor O'Donovan, of Baltimore, Md., on October 27, 1921.

R. W. Evitt, B.S., in Eng., 1917, and Miss Elsa L. Schwarz, of Baltimore, Md., on October 12, 1921.

A. B. Faust, '89, Ph.D., 1892, and Miss Theodora Luise Leisner, of Berlin, Germany, on July 20, 1921.

R. Howell, '14, Ph.D., 1917, and Miss Katharine Louisa Clifford, of Cape Elizabeth, Me., on September 3, 1921.

V. R. Mason, M.D., 1915, and Miss Lucy Meredith Ginn, of Millwood, Va., on August 17, 1921.

F. K. Murray, '10, and Miss Katharine Poullain Goodridge, of Baltimore, Md., on June 9, 1910.

B. Ober, former student, and Miss Eleanor Rogers Kinsolving, of Baltimore, Md., on October 8, 1921.

J. E. Snyder, '13, and Mrs. Nellie Lawson, of Washington, D. C., in July, 1921.

M. G. Tull, '13, and Miss Ethel May Miller, of Baltimore, Md., on October 11, 1921.

C. J. Weber, '14, and Miss Clara Carter, of Waterville, Me., on June 23, 1921.

DEATHS

H. C. Adams, Ph.D., 1878, on August 11, 1921.

Lulu M. Bailey, former student, in February, 1921.

H. V. Black, Ph.D., 1900.

C. D. F. Brune, former student, on June 18, 1921.

S. S. Eiseman, '06, on September 28, 1921.

L. C. Fenstermacher, former student, in July, 1921.

W. H. Perkins, Jr., '84, on September 20, 1921.

J. H. Voss, former student.

BOOK REVIEWS

The Rise of Cotton Mills in the South. By BROADUS MITCHELL, PH.D., Johns Hopkins University Studies in Historical and Political Science, Series xxxix, No. 2. Baltimore, The Johns Hopkins Press, 1921.

The Rise of Cotton Mills in the South by BROADUS MITCHELL, PH.D., instructor in Political Economy, is the most recent number of the Johns Hopkins Studies in Historical and Political Science. This important contribution to Southern economic history treats in the main of the score of years from 1880 to 1900, with a valuable introductory chapter discussing the history of cotton manufacture in the South in the century prior to 1880. The cotton raising South realized at the time of Hancock's defeat for the presidency that she was free to work out her own salvation since the period of Reconstruction was ended, but that her predominance in the national councils could not be again expected soon to return. Edward Atkinson successfully urged the Cotton States Exposition at Atlanta in 1881 which did much (more than its original promoter desired) toward turning the people's attention to manufacturing. The people understood that there was an important potential source of labor in the poor whites, and the small returns of farming during the period made the tenant farmers willing to turn from their former occupations to work in the mills. One town after another took up the establishment of a mill as a community matter and local capital was contributed for such enterprises. Northern financial aid was received, especially through the medium of stock given to makers of machinery in return for the machinery placed in the mills and through the interest of cotton commission houses in the various enterprises. The 1880 Census "enabled the South to take stock of its industrial condition," and twenty years later it had been satisfactorily proved that cotton manufacturing could be carried on in the section of the United States in which cotton was grown. The small use of negro labor in the mills is explained: the large use of the labor of women and children also finds explanation. The relative advantages and disadvantages of Northern and Southern mills are given exposition. The personal influence of individuals is emphasized—a feature too often neglected in economic history,—and the development of Southern feeling from the antebellum "obsession with cotton-raising and politics" to the diversification of industry through the introduction of manufactures finds adequate description.

NECROLOGY

EDWARD BENNETT ROSA, PH.D., 1891

Dr. Edward Bennett Rosa, chief physicist of the Bureau of Standards, Washington, D. C., died suddenly in his office at the Bureau Tuesday afternoon, May 17, 1921. Dr. Rosa was born in Rogersville, New York, October 4, 1861, and was the son of Rev. Edward David and Sarah G. Rosa. In March, 1894, he was married to Mary Evans, of Harrisburg, Pa.

Dr. Rosa was a graduate of Wesleyan University, Middletown, Conn., in the class of 1886. He was a member of the Delta Kappa Epsilon Fraternity. After leaving Wesleyan he entered Johns Hopkins University as a graduate student and received the degree of Doctor of Philosophy in 1891. In 1906 the honorary degree of Doctor of Science was conferred on him by Wesleyan University.

For a short time he was instructor at the University of Wisconsin, leaving there to become professor of Physics at Wesleyan University. He became the chief physicist at the Bureau of Standards in 1901.

He has done notable work in science and electrical engineering. At Wesleyan University he developed the physical side of the respiration calorimeter with Professor W. O. Atwater. This apparatus was of great value in the pioneer investigations on the value of foods and the study of nutrition problems. He took a leading part in the researches to establish the fundamental electrical units after coming to the Bureau of Standards, and served as secretary of the International Committee on Electrical Units and Standards. He developed the electrical work of the Bureau of Standards from small beginnings into an organization covering the scientific and engineering aspects of a great national laboratory.

When Dr. Rosa took charge of the Electrical Division of the Bureau of Standards, in addition to the general supervision of the work of the division he took charge of the section on Inductance and Capacity and Absolute Measurements. As the work of the Electrical Division grew, it was necessary for him to relinquish some of the detailed work of this section. However, he remained in active charge of the section until the division moved into the electrical building in 1915.

When Dr. Rosa began his work in the Electrical Division, it was his ambition to determine a number of the fundamental electrical constants. In conjunction with Dr. Dorsey he immediately undertook the determination of

the ratio of the electromagnetic and electrostatic units. The results obtained are the most accurate which have ever been determined.

About 1907 Dr. Rosa and Dr. Dorsey started their work on the determination of the ampere. This work ran over a period of years and gave a value of the ampere which had not previously been equalled. In order to be able to reproduce the ampere in a concrete way Dr. Rosa and Mr. Vinal started work on the silver voltameter. This was carried on simultaneously with the absolute determination of the ampere, so that now we are able to define the ampere in a satisfactory manner.

Dr. Rosa devised a new apparatus for determining the absolute value of the ohm. Models of this were tried in 1908 and 1909 and gave promise of satisfactory results. However, the pressure of other work compelled the abandonment of this experiment, but Dr. Rosa had always hoped that the time would soon come when it might be continued.

Dr. Rosa found that the formulae for the computing of inductance were not well developed and were scattered widely through the literature. He undertook to collect these formulae together and in doing so found it desirable to increase their number considerably. During his early years at the Bureau, he published a large number of papers on the computing of inductance. Finally, in connection with Dr. Grover, he collected together practically all the known formulae for computing inductance. This collection is known the world over as being a model of its kind.

In 1910 there was instituted under Dr. Rosa's direction an exhaustive investigation into the subject of electrolytic corrosion of underground gas and water pipes, and lead cable sheaths due to stray currents from electric railways. This problem has for years been one of major importance to public utility companies throughout the country, and prior to the work being taken up under Dr. Rosa's direction at the Bureau of Standards very little definite information was available as to the laws governing electrolytic corrosion or the methods of reducing trouble from this source. The work done under his direction included a definite establishment of laws governing electrolytic corrosion and much progress in the direction of mitigating trouble of this nature. This work has for a number of years been carried on in close coöperation with the utility interests of the country through the medium of the American Committee on Electrolysis, of which Dr. Rosa was a member.

During the late war Dr. Rosa directed the development of a number of scientific instruments which were of inestimable value to the American forces in France. Among these might be mentioned a sound ranging device for locating big guns; the

geophone for the detection of mining operations; the development of aircraft radio apparatus; and the improvement of radio direction finders by which enemy ships and aircraft could be located. Under his direction at the Bureau of Standards was established perhaps the finest radio research laboratory in the country, and he always showed an intense interest in improving apparatus and methods of radio communication.

In addition to his diversified work in the field of electrical research, Dr. Rosa was keenly interested in the prevention of industrial accidents and in the promulgation of safety standards for use by state, municipal, and insurance organizations. He conceived the idea of a national electrical safety code several years ago, and the present code is largely the result of his efforts. Similarly the Bureau has undertaken a number of other national safety codes, the Safety Code Section working under his direction.

His broad vision showed him the need of a central clearing house for engineering standards. For years he worked whole-heartedly to bring about the formation of such an organization. It was due in no small measure to his efforts that the American Engineering Standards Committee is now functioning.

The broader aspects of the scientific and engineering work of the Federal Government were clearly presented in a series of papers by Dr. Rosa, while his analysis of government expenditures was largely quoted by leading periodicals, as well as in both Houses of Congress. His last paper on this subject would in itself have established his national reputation.

Dr. Rosa was a charter member and one of the officers of the Federal Club, an organization of executives of the various governmental departments.

Dr. Rosa received the Elliott Cresson Medal of the Franklin Institute. He was a Fellow of the American Institute of Electrical Engineers, the American Physical Society, the American Association for the Advancement of Science, and a member of the National Academy of Sciences. He was also a member of the Illuminating Engineering Society, Washington Academy of Sciences, and the Philosophical Society.

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